

DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF ALBERTA

CALENDAR OF THE
UNIVERSITY
OF
ALBERTA
EDMONTON



SESSION 1924-25

TIME TABLE—FACULTY OF ARTS AND SCIENCES, 1924-25
(B.A., B.Sc. in Arts, B.Sc. in H.Ec., B.Sc. in Pharm., B. Com.)
[Also First Year Engineering]

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:30	Eng 1 (A) Fr A (A) Germ A (A) Lat A (A) Fr 5—4 (A) Grk 2—4 Chem 58 Eng 52 H Ec 55 H Ec 57	Fr A (B) Fr 1—3 (A) Germ A (B) *Math 2 Phil 2 Bot 52 Chem 51 Hist 54 H Ec 55 lab Math 57 Psych 54	Eng 1 (A) Fr A (A) Germ A (A) Lat A (A) Fr 5—4 (A) Grk 2—4 Lat 66 2nd term Chem 58 Eng 59 H Ec 55	Fr A (B) Fr 1—3 (A) Germ A (B) *Math 2 Phil 2 Bot 52 Chem 51 Hist 54 Math 57 Psych 54	Eng 1 (A) Fr A (A) Lat A (A) Fr 5—4 (A) Grk 2—4 Chem 58 Eng 52 H Ec 57	Fr A (B) Fr 1—3 (A) Germ A (B) *Math 2 Phil 2 Bot 52 Chem 51 Hist 54 H Ec 55 lab Math 57 Psych 54
9:30	Eng 1 (B) Phys 1 (A) Eng 2 *Math 2 Chem 52 Fr 55 Geol 53 Grk 51 H Ec 51 H Ec 55 lab Math 56 Math 53 Psych 52	Eng 1 (C) Fr A (C) Fr 1—3 (E) Phys 1 (B) Chem 1 Phys 3 Cl in Eng 51 Geol 58 Germ 54 H Ec 51 H Ec 55 lab Math 61 Mat Med 52 Pharm 51 Phil 53 Phys 51	Eng 1 (B) Phys 1 (B) Eng 2 *Math 2 Chem 52 Fr 55 Geol 53 Grk 51 H Ec 51 Hist 56 Math 52 Psych 52	Eng 1 (C) Fr A (C) Fr 1—3 (E) Phys 1 (B) Chem 1 Phys 3 Cl in Eng 51 Geol 58 Germ 54 H Ec 51 H Ec 55 lab Math 61 Mat Med 52 Pharm 51 Phil 53 Phys 51	Eng 1 (B) Phys 1 (A) Eng 2 *Math 2 Chem 52 Fr 55 Geol 53 Grk 51 H Ec 51 Hist 56 Math 53 Pharm 55 lab Psych 52	Eng 1 (C) Fr A (C) Fr 1—3 (E) Phys 1 (B) Chem 1 Phys 3 Cl in Eng 51 Geol 58 Germ 54 H Ec 55 lab Math 61 Mat Med 52 Pharm 51 Phil 53 Phys 51
10:30	Eng 1 (D) Fr 1—3 (B) Lat A (B) Fr 5—4 (B) Phys 8 Pol Ec 1 Acct'y 52 Geol 62 H Ec 52 H Ec 56 Hist 58 Math 55 Mat Med 51 Phil 51 Physiol 61	Hist 1 Acct'y 1 Bot 1 H Ec 2 1st term H Ec 3 2nd term Lat 2—4 Phys 6 †Comp Lit 51 Eng 61 Geol 55 Hygiene 51 Hist 58 H Ec 55 lab Mat Med 51 Math 63 2nd term Phys 54 Pol Ec 67	Eng 1 (D) Fr 1—3 (B) Lat A (B) Fr 5—4 (B) Phys 8 Pol Ec 1 Acct'y 52 Geol 62 H Ec 52 Hygiene 51 Hist 58 Math 55 Phil 51 Toxic 61 2nd term Physiol 61	Hist 1 Acct'y 1 Bot 1 H Ec 2 1st term H Ec 3 2nd term Lat 2—4 Phys 6 †Comp Lit 51 Eng 61 Geol 55 H Ec 55 lab Hist 58 Math 63 2nd term Phys 54 Pol Ec 67	Eng 1 (D) Fr 1—3 (B) Lat A (B) Fr 5—4 (B) Phys 8 Pol Ec 1 Acct'y 52 H Ec 52 H Ec 56 Hist 58 Math 55 Pharm 55 lab Physiol 61	Acct'y 1 Bot 1 H Ec 2 1st term H Ec 2nd term Lat 2—4 Phys 6 Phys 1 (C) lab †Comp Lit 51 Eng 61 Geol 55 Mat Med 51 Math 63 2nd term Phys 54 Pol Ec 67
11:30	Fr 1—3 (C) Lat 1—3 (A) Math 1 (B) Math 1 (A) Math 1 (C) Math 3 Bact 2 & 61 1st term Germ 2—4 H Ec 1 2nd term Hist 2 Math 22 Pol Ec 10 2nd term Com'l Law Eng 62 Ent 61 Geol 51 & 33 Pol Ec 53 Psych 56	Germ 1—3 (B) Lat 1—3 (B) Hist 3 Math 7 Phys 12 Zool 1 Biochem 61 Chem 54 Fr 51 Lat 53 Math 56 Phil 55 Phys 53	Fr 1—3 (C) Lat 1—3 (A) Math 1 (A) Math 1 (B) Math 1 (C) Math 3 Germ 2—4 Hist 2 Math 22 Pol Ec 10 2nd term Com'l Law Eng 62 Ent 61 & 33 Pol Ec 63 Psych 51 Psych 56	Germ 1—3 (B) Lat 1—3 (B) Hist 3 Math 7 Phys 12 Zool 1 Biochem 61 Chem 54 Fr 51 Lat 53 Math 56 Phil 55 Phys 53	Fr 1—3 (C) Lat 1—3 (A) Math 1 (A) Math 1 (B) Math 1 (C) Math 3 Germ 2—4 Hist 2 Math 22 Pol Ec 10 2nd term Com'l Law Eng 62 Ent 61 Geol 51 Pharm 55 lab Pol Ec 63 Psych 51 Psych 56	Germ 1—3 (B) Lat 1—3 (B) Hist 3 Math 7 Phys 1 (C) lab Phys 12 Zool 1 Biochem 61 Chem 54 Fr 51 Lat 53 *Math 56 Phil 55 Phys 53
1:30	Fr A (D) Grk 1 Hist 1 (A) Lat A (C) Phys 3 lab Phys 6 lab Phys 8 lab Zool 1 lab Biochem 61 lab Chem 59 lab Geol 53 lab Geol 58 lab H Ec 52 lab	Hist 1 (C) Phys 1 (A) lab H Ec 2 lab 1st term H Ec 3 lab 2nd term Math 22 (A) lab Bact 61 lab 1st term Bot 52 lab Chem 54 lab Ent 62 lab Geol 62 lab H Ec 59 lab 1st term H Ec 58 lab 2nd term Pharm 54 lab Phys 54 lab	Fr A (D) Grk 1 Hist 1 (E) Lat A (C) H Ec 1 lab 2nd term Chem 1 (A) lab Chem 51 lab Chem 59 lab 2nd term Ent 61 (A) lab Geol 55 lab H Ec 55 lab Math 63 lab 2nd term Pharm 54 lab Phys 53 lab	Hist 1 (G) Phys 1 (B) lab Bot 1 lab Chem 1 (B) lab Phys 12 lab Chem 52 lab Ent 62 lect Geol 51 lab Pharm 55 lab	Fr A (D) Grk 1 Hist 1 (I) Lat A (C) Bact 2 lab 1st term Math 22 (B) lab Chem 58 lab Ent 61 (B) lab H Ec 51 lab Physiol 61 lab	
2:30	Fr A (E) Germ 1—3 (A) Hist 1 (B) Lat 1—3 (C) Math 1 (D) Phys 3 lab Phys 6 lab Phys 8 lab Zool 1 lab Anc Hist 51 Biochem 61 lab Chem 59 lab Eng 53 Geol 53 lab Geol 58 lab H Ec 52 lab Pol Ec 66	Phys 1 (A) Hist 1 (D) H Ec 2 lab 1st term H Ec 3 lab 2nd term Math 22 A lab Bacter 61 lab 1st term Bot 52 lab Chem 54 lab Ent 62 lab Geol 62 lab H Ec 59 lab 1st term H Ec 58 lab 2nd term Pharm 54 lab Phys 54 lab	Fr A (E) Germ 1—3 (A) Hist 1 (F) Lat 1—3 (C) Math 1 (D) Chem 1 (A) lab H Ec 1 lab 2nd term Anc Hist 51 Chem 51 lab Chem 59 lab Eng 53 Ent 61 (A) lab Geol 55 lab H Ec 55 lab Math 63 lab 2nd term Pharm 54 lab Phys 53 lab Pol Ec 66	Hist 1 (H) Phys 1 (B) lab Bot 1 lab Chem 1 (B) lab Chem 52 lab Ent 62 lab Geol 51 lab Pharm 55 lab	Fr A (E) Germ 1—3 (A) Hist 1 (J) Lat 1—3 (C) Math 1 (D) Bacter 2 lab 1st term Math 22 (B) lab Anc Hist 51 Chem 58 lab Eng 53 Ent 61 (B) lab H Ec 51 lab Physiol 61 lab Pol Ec 66	
3:30	Eng 1 (F) Fr 1—3 (D) Zool 1 lab Biochem 61 lab Chem 59 lab Geol 53 lab Geol 58 lab H Ec 52 lab	H Ec 2 lab 1st term H Ec 3 lab 2nd term Bacter 61 lab 1st term Bot 52 lab Chem 54 lab Ent 62 lab Geol 62 lab H Ec 59 lab 1st term H Ec 58 lab 2nd term Pharm 54 lab Phys 54 lab	Eng 1 (F) Fr 1—3 (D) Chem 1 (A) lab H Ec 1 lab 2nd term Chem 51 lab Chem 59 lab Ent 61 (A) lab Geol 55 lab H Ec 55 lab Math 63 lab 2nd term Pharm 54 lab Phys 53 lab	Bot 1 lab Chem 1 (B) lab Chem 52 lab Ent 62 lab Geol 51 lab Pharm 55 lab	Eng 1 (F) Fr 1—3 (D) Bact 2 lab 1st term Chem 58 lab Ent 61 (B) lab H Ec 51 lab Physiol 61 lab	
4:30		C O T C	C O T C	C O T C		

*Engineering students only.
†See under Department of Modern Languages.
N.B.—1. Physical Education 1 and 2 at 4.30; days to be arranged.
2. Honours Courses; and Teachers Courses in Psychology 51 and 55 and Education 53 to be arranged.

THE
UNIVERSITY OF ALBERTA

CALENDAR 1924-25



EDMONTON



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Academic Calendar

1924

August

- 2—Applications due for September Matriculation at the office of the Chairman of the High School and University Matriculation Examinations Board, Parliament Buildings.
- 9—Last day for receiving applications for examinations on behalf of affiliated societies.
- 23—Last day for receiving applications for supplemental examinations.

September

- 2—Autumn Matriculation Examinations.
- 9—Examinations of affiliated societies.
- 26—All supplemental examinations.
- 26, 27—Registration of Freshmen and new students.
- 29, 30—Registration of all other students.
- 29—Lectures in first year courses begin.

October

- 1—Lectures in other courses begin.
- 9—University Field Day.

November

- 1—Last day for graduate and B.D. students to adjust courses or submit subjects of investigation.
- 17—First Junior tests begin.

December

- 2—Examinations of the Institute of Chartered Accountants of Alberta.
- 15—First Senior Tests begin.
- 21—Christmas vacation begins.

UNIVERSITY OF ALBERTA

1925

January

- 5—Lectures begin.
- 19—Examinations of The Alberta Land Surveyors' Association.

February

- 2—Second Junior Tests begin.
- 16—Second Senior Tests begin.
- 25—Ash Wednesday.

March

- 21—Lectures close in second year of B.S.A. course.
- 24—Examinations begin in second year of B.S.A. course.
- 28—Lectures close in second and third years of Applied Science.

April

- 1—Examinations begin in second and third years of Applied Science.
- 4—Applications due for May Matriculation Examinations at the office of the Examinations Board, Parliament Buildings.
- 4—Last day for graduate students to hand in report of results of investigation or thesis.
- 10—Good Friday.
- 13—Survey School begins.
- 15—Last day for Theses for prizes.
- 16—Lectures close in Arts, Law, Medicine, Pharmacy, B.Sc. in Agriculture, and first, fourth and fifth years in Applied Science.
- 18—Final Examinations in all Faculties.
- 21—Examinations of The College of Physicians and Surgeons of Alberta, The Law Society, the Dental Association, Land Surveyors, Architects' Association, Alberta Association of Registered Nurses, The Veterinary Association of Alberta, The Alberta Optometric Association, and The Alberta Pharmaceutical Association.

May

- 2—Examinations close.
- 9—Charter Day.
- 14—Senate meets.
- 15—Convocation for the conferring of degrees.

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THE HONOURABLE ROBERT GEORGE BRETT, M.D., LL.D., Lieutenant-Governor of Alberta.

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REV. DAVID GEORGE McQUEEN, B.A., D.D., LL.D.
CHARLES FREDERICK REILLY, B.Sc.
ROBERT HOWARD DOBSON, M.A.

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JOSEPH DOLSON OLIVER MOTHERSILL, B.A.

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ROBERT KAY GORDON, M.A., Ph.D., and
STANLEY SMITH, M.A., B.Sc., Representatives of the Faculty of Arts and Sciences to retire March 8th, 1926.

ROBERT NEWTON, M.Sc., Ph.D., and
EDGAR HAROLD STRICKLAND, M.Sc., Representatives of the Faculty of Agriculture to retire March 8th, 1926.

ARDREY WHIDDEN DOWNS, M.A., M.D., D.Sc., and
EGERTON LLEWELLYN POPE, B.A., M.D., M.R.C.P., Representatives of the Faculty of Medicine to retire March 8th, 1926.

CHARLES ALEXANDER ROBB, B.Sc., M.S., and
IBRAHIM FOLLANSBEE MORRISON, B.S., Representatives of the Faculty of Applied Science to retire March 8th, 1925.

WILFRED ALFRED WILSON, M.D., L.R.C.P. & S., F.A.C.S., Representative of the College of Physicians and Surgeons of Alberta.

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Organization of the University

History and Government

The University of Alberta was created by an act of the Legislature of the Province passed at the first session after provincial autonomy had been granted (1906); that is, the act created the machinery by which the University could be brought into existence. By this act the University, which then consisted of the Chancellor, the Vice-Chancellor, the Senate, and the Convocation, was empowered to undertake the organization and development of the teaching faculties, to affiliate colleges, and, generally, to undertake all work relating to an institution of higher learning. An amendment to the act, passed during the session of the Legislature in 1907, authorized the Lieutenant-Governor-in-Council as a preliminary step to the organization of the University, to appoint the first President, to whom was to be given the responsibility, in conjunction with the Senate, of organizing and developing the university scheme. Acting upon this authority the Government selected the first President, Henry Marshall Tory, who entered upon his duties on January 1st, 1908.

Under the act, all resident graduates of British and Canadian universities were entitled to become members of the convocation of the University of Alberta, by registering before a fixed date. Three hundred and sixty-four graduates, representing all the Canadian and many of the British Universities, registered, so that a large and representative body constituted the first Convocation.

The act also provided that the Senate should consist of fifteen members, ten to be appointed by the Government, five to be selected by the members of Convocation from among themselves. The Chancellor likewise was to be chosen by a ballot of Convocation. The voting for the first Senate election closed on March 18th, 1908, and immediately thereafter the Government nominated its ten representatives. Mr. Justice Stuart of Calgary was chosen as first Chancellor.

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As the Act made the Senate the governing body of the University, both in relation to education and business management, at the first meeting of that body, on March 30th, 1908, it took all the necessary steps to organize the first faculty, to be known as the Faculty of Arts and Sciences, and to open the University of Alberta for classes in this Faculty in September, 1908.

At the second meeting of the Senate, held in Calgary, July 6th, 1908, the first faculty appointments were made, four professors being named to co-operate with the President in the work of commencing instruction.

The first session of the University opened on September 23rd, 1908. The total registration for the session was forty-five, four of whom were students taking graduate courses in the Department of Physics.

At the second session of the Second Legislature, November, 1910, a comprehensive measure reorganizing in large part the government of the University was introduced and passed into law. By the new act a Board of Governors was constituted, to consist of the Chancellor and the President of the University, ex-officio, together with nine members to be appointed by the Lieutenant-Governor-in-Council; the functions of this Board may be defined generally as those of business management and administration, including the making of appointments to the teaching and office staff of the University, the handling of all University moneys and investments, and the supervision of buildings and grounds. The Senate, by this same act, was continued as a body entrusted with the general supervision of the University's educational work. It is defined by the statute to consist of the Chairman of the Board of Governors, the President, the heads of affiliated Colleges, the Deans of the University Faculties, all ex-Chancellors or ex-Vice-Chancellors of the University, the Senior Principal of the Provincial Normal Schools, and the Deputy-Minister of Education for the Province ex-officio; of faculty representatives; of representatives of all societies whose examinations for status are conducted by the University; and of ten members elected by Convocation. The prerogatives of the Senate include the field of student regulation and discipline, the approval of all educational schedules or programmes, and the establishing and conferring of degrees. The Convocation, under this act, is composed of all graduates of the University and of all the resident graduates of British

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and Canadian universities who registered under the University Act of 1906. Convocation is empowered to consider all questions affecting the well-being of the University and to make representation thereupon, to the Board and to the Senate.

Conformably with the provisions of this act, late in December, 1910, the Lieutenant-Governor-in-Council appointed nine members of the Board of Governors, who met and organized early in January, 1911. An election for members of the Senate, in accordance with the terms of the act, was ordered. By March 8th the elective members of the Senate had been chosen, and the new Senate held its first meeting for the transaction of business on March 31st, 1911, completing, among other items, arrangements for the first graduation exercises of the university. These took place on May 16th, 1911.

During the summer of 1911, Athabasca Hall, the first building of the University scheme to be completed, was made ready for occupation, and lectures were given for the first time on the University Grounds in September of that year. At the same time excavations were begun for a second hall of a similar nature. This became available for partial occupation in October, 1912, and in its entirety by the beginning of 1913, under the name of Assiniboia Hall. In the autumn of 1913 the foundations of the third building, Pembina Hall, were laid, and in October, 1914, a considerable part of it was ready for use as class-rooms. It is now used for residential purposes only.

From its very beginning the University of Alberta has undertaken extension work in the form of lectures by members of its staff in a number of important provincial centres, but special emphasis was laid upon this side of the University's activities by the appointment in May, 1912, of a special Secretary of the Department of Extension. This officer undertook the task of systematizing the extension work in such a way as to enable the University to achieve more fully the important function of reaching in its educational work the people of the province at large.

The Department of Extension also inaugurated in 1913 a press bulletin, a system of travelling libraries, and a bureau of information from which literary clubs and debating societies can obtain briefs on issues of all sorts. It organized in the

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same year a high school debating league which has stimulated very remarkably the interests of the secondary schools of the Province in argumentation and public speaking. A new departure in 1915 was the presentation to Edmonton and Calgary audiences of a series of discussions on the social problems of western Canadian life.

The year 1912 saw another development of the University's activity in the creation of a Faculty of Law; this was effected by a resolution of the Senate under date of October 3rd, upon which the Board of Governors took favorable action shortly afterwards. A three-year course leading to the degree of LL.B. was established, and thirty-five students were enrolled for the first session of the new faculty. In 1914 this course, portions of which coincide with the requirements of the Alberta Law Society, was extended to cover four years.

In the autumn of 1913 the Department of Civil Engineering and its allied subjects ceased to form a portion of the original Faculty of Arts and Sciences, and were constituted a new faculty under the name of the Faculty of Applied Science. At the same time the fourth University faculty came into existence, and instruction began in the Faculty of Medicine. Twenty-six students constituted the first class in this faculty, and arrangements were perfected to carry them through at least three years of a five year course, with the privilege of being then transferred, if necessary, with full standing to certain Eastern universities. Under the Faculty of Medicine a Department of Pharmacy has been organized; instruction in this Department began in October, 1914, designed to prepare students to satisfy the requirements of the Pharmaceutical Association of Alberta. A feature of interest in connection with the Faculty of Medicine is the University Medical Service whereby the health of all students is supervised in a very direct manner. A small hospital is maintained for the benefit of student patients on the lower floor of the south wing of Athabasca Hall.

In December, 1913, the contracts were let for the construction of what is known as the main teaching building of the University. This fine structure in the neo-classic style ranks high among the university buildings of Canada for the combination it presents of utility and beauty. It was occupied in October, 1915, being opened with comparatively simple ceremonies because of the shadow of war which then began to rest so heavily upon the country.

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On the work of the University in the war, record will be made elsewhere; it is fitting, however, to note here that the University of Alberta sent into various branches of His Majesty's service in all parts of the world 438 undergraduates, alumni and staff-members. Of these a large number received special military decorations from the British Empire and several also from the French Republic and other Allied Governments, while to more than sixty it was given to offer for their country the last measure of sacrifice.

During the long period of the Great War, all building activities were suspended, but in May, 1919, arrangements were made to proceed with an extension of the then existing civil engineering unit and to duplicate this building by a similar structure at the north end of the main teaching building.

In September, 1915, the fifth university faculty came into existence when the Faculty of Agriculture was created. The southern end of the University property is largely devoted to the farm buildings and experimental plots of this College, and it became necessary in the spring of 1919 to acquire still more land a short distance south of the university site proper in order to provide further facilities for the study of animal husbandry.

Pharmacy, which as above noted, began its work as a Department of the Faculty of Medicine in October, 1914, was in the spring of 1917 erected into a School of Pharmacy, designed not only to give instruction in such work as is required by the Pharmaceutical Association of Alberta, but also to carry forward to a degree such students as may decide to devote four years of study to the work. In this manner the whole standard of Pharmacy in the Province of Alberta is distinctly elevated.

Dentistry was authorized as a sub-faculty under the Faculty of Medicine in 1917, and the first students under this arrangement offered themselves in the session of 1918-19. It is proposed for the present that they shall complete their work in Eastern schools under equitable arrangements such as have been made for students in the Faculty of Medicine.

In 1918 the Department of Household Economics was organized under the Faculty of Arts and Sciences, the need having already been made clear by a demand for this work

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the previous session. In the fall of 1918 also special recognition was accorded the physical needs of the rapidly growing body of women students by the appointment of a Directress of Physical Education for Women.

In the fall of 1918 the College of Agriculture lent itself most heartily to the pressing demands of reconstructional education by offering courses of a special nature in various agricultural lines and also in carpentering and blacksmithing. A large number of returned soldiers were in this way most satisfactorily accommodated, and assisted to adapt themselves for the tasks of civil life.

The insistent demands of the economic and social problems of the province were recognized by the creation in the spring of 1919 of chairs of Soils, Mining Engineering and Economics, in all of which a full measure of work was offered in the fall of 1919. All of these subjects had previously been handled as branches of already existing departments but with the recognition of their growing importance came the decision to treat them as independent units of the educational scheme.

The extraordinary increase in the number of students in the Faculty of Medicine, made it absolutely imperative in the fall of 1919 to consider the question of the future housing of that Faculty, and the Board of Governors authorized early in 1920 the construction of a Medical Building, work on which began in April of that year. The new edifice faces south on the quadrangle of university buildings, and is in architectural harmony with the general neo-classic style adopted some years previously for the whole university scheme. In addition to accommodating the Department of Chemistry, it contains laboratories for the Departments of Anatomy, Physiology, Biology, Pathology and Public Health, and also two lecture halls in theatre form with a capacity of two hundred students each. Full advantage has been taken in the erection of this building of the wide experience afforded by the last twenty years in such matters.

The status of the School of Pharmacy was augmented during the academic year 1919-20 by the creation of the office of Director of the School; this step completed the evolution of the School from a Department under the Faculty of Medicine to an independent unit in the University plan.

During the session 1919-20, the entire university cur-

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riculum in all faculties was subjected to careful scrutiny and revision in the light of the most recent developments in the theory of university education and of the growth of the demand in the province for university training, and the results of this investigation, constituting the most important advance in the scholastic history of the institution, became available by authorization of the Senate for the academic year beginning in September, 1920. The general aim of the revision was to secure greater freedom in the election of courses without abandoning in any sense the basic features of a sound education as dictated by long experience.

A notable feature of the university life during the winter of 1919-20 was the formation of the Scientific Association of the University of Alberta, comprising all the members of the staff engaged in teaching and research work in the pure and applied sciences. The meetings of this society revealed in a convincing way the present lack of existing knowledge in regard to the facts upon which the economic life of the Province of Alberta must ultimately depend, and at least forty problems of pressing importance were definitely formulated and submitted to the government of the province for consideration. With the entire concurrence of the latter the university assumed through its various departments the important duty of economic research into the resources of the province under the general chairmanship of the Honourable J. L. Côté, Provincial Secretary, and during the field season of 1920 operations began on a definite and considered basis. In this connection the university farm, primarily equipped for the purposes of the Department of Agriculture, was authorized by the Board of Governors to conduct an experimental station for agricultural research.

The deanships of the University, first instituted in May 1914 by the appointment of Professor Kerr as Dean of the Faculty of Arts, and added to by the appointment of Dean Howes in the Faculty of Agriculture in 1915, were further increased in the spring of 1920 by the nomination of Dr. Rankin to the deanship of the Faculty of Medicine, and in the autumn of 1921 by the selection of Professor R. W. Boyle as Dean of the Faculty of Applied Science.

As an outcome of a successful series of monthly extension lectures in the history of economic thought given at the Calgary Labor Temple, in the winter of 1920-21, an Extension Lecturer in Economics was added to the staff; and the follow-

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ing winter, in cooperation with the Provincial Department of Labor, weekly tutorial classes in Economic Principles and Institutions were conducted for twenty-five weeks with the Calgary and Edmonton Trades and Labor Councils respectively. During the 1922-23 session, weekly lectures in the Government of Modern Democracies (fall term) and in Studies in Canadian Public Finance (winter term) were continued under the auspices of the Educational Committee of the Edmonton Trades and Labor Council. (A weekly lecture course in History and Economics was conducted contemporaneously by the Department of Extension for women workers at the Edmonton Y.W.C.A.).

During the same season over 120 registrations were received from farmers, coal miners, teachers and others, throughout the Province, in the correspondence course in Principles of Political Economy (20 studies).

The Medical Building, begun in the spring of 1920, was brought to completion in the summer of 1921, thus becoming available for teaching purposes in September. The equipment of this building in all departments is particularly adequate for scientific instruction in Medicine and for the needs of medical research, and during the year 1920-1921 the Departments of Physics and Chemistry, the work of which bears an important relation to that in the Faculty of Medicine, received also generous additions to their material resources.

Negotiations of vital interest to the future of medical teaching in the University were begun during the summer of 1920 with the Rockefeller Foundation, instituted by John D. Rockefeller, for the promotion of better medical training in the United States and Canada; the sum of one hundred millions of dollars has been placed under the administration of this Foundation, of which five millions is for use in the Dominion of Canada. During the period when the negotiations were still incomplete the sum of twenty-five thousand dollars annually, representing the interest on half a million, was made available for the use of the Medical Faculty in the University of Alberta, and in the fall of 1923 the principal amount was paid over to the University in full, constituting the first great endowment received by the University of the Province from private sources.

In the Faculty of Agriculture during the year 1920-21, a new department of Agricultural Engineering was added. In

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this department, as in all the other departments of the Faculty of Agriculture, much progress was made in providing the equipment required for practical instruction in agricultural subjects and for the furtherance of scientific investigation in agriculture generally.

The relation of the University to public service was further emphasized during 1920-21 by the inclusion in the University's lecture and examination programme of the courses relating to the training of nurses for the Public Health service of the Province. Legislative enactment also placed optometry and veterinary science under the control of the University Senate for purposes of examination for license to practise within the Province.

The Provincial Legislature at its 1921 session passed an amendment to the Legal Profession Act whereby the establishment of a School of Law in connection with the University was made possible. In accordance with this provision the School was instituted forthwith and first year courses in Law offered in September of the same year. The first class to receive degrees from the School graduated in May, 1924.

In 1922 negotiations were entered into between the University of Alberta and the City of Edmonton for the transfer to the University of the hospital erected in 1913 on a site provided by the University, and, as a result of the successful completion of these discussions, the University is now in possession of the University Hospital, which thus becomes directly available for clinical instruction in medicine. In connection with the University Hospital there has also been established an outdoor clinic, and the University of Alberta is thus enabled to offer a complete course in Medicine. The fourth year was offered for the first time in the session of 1922-3, and a final year in the Faculty of Medicine became first available in the session 1923-24.

LIBRARY

University Library

The Library of the University contains about 26,000 volumes, and is being added to as circumstances permit.

The main Reading Room is in the Arts Building; during the session about 1,200 of the books required in connection with the various classes are kept on open shelves in this room for the convenience of students. The Stack Room is below the Reading Room, and all students may borrow books from it, but only senior students are allowed to study in the Stack Room.

The Medical Building has its own Reading Room, in which the medical section of the Library is housed, and the Agricultural Building has a similar separate Reading Room.

The Law Library occupies a separate room in the Arts Building, and a Reading Room for Research workers has been established.

The Library subscribes to a large number of the most important periodicals, which are available for consultation.

Matriculation

Classification of Students

The courses of study in the University are open to men and women on equal footing.

Except under special circumstances no student under sixteen years of age will be admitted to the first year, or under seventeen to the second year.

No one shall be registered as a student for a full undergraduate course who has failed in more than two of the subjects enumerated in the Matriculation Examination Requirements for the various faculties.

Students are classified as Graduate, Undergraduate, Conditioned, Partial and Special.

Graduate students are those who hold the Bachelor's degree (B.A. or B.Sc) and are either pursuing special studies in advanced courses, or have been formally admitted upon the recommendation of the Committee on Graduate Studies, to candidacy for the Master's degree.

Undergraduates are matriculated students who are taking a full undergraduate course leading to a degree. In order to become undergraduates, candidates must have passed the full matriculation examination of the University or some other equivalent examination.

Conditioned students are those who having failed in not more than two subjects of their matriculation examination are actually taking a full undergraduate course leading to a degree, and are entitled to obtain undergraduate standing on completing their matriculation.

For students who are deficient in the language subjects and are admitted as conditioned students, special preparatory classes are provided. Students are advised, however, that the additional work required in carrying these preparatory classes constitute a handicap which should be avoided if possible.

MATRICULATION REQUIREMENTS

Partial Students. Students who are proceeding to a degree, but who are not registered for a full undergraduate course, or who during the session drop two courses, are partial students.

Special students are those who, not belonging to one of the above classes of students, are pursuing the study of particular subjects. Such students may, subject to the approval of the Committee on Admissions, attend classes without previous examination, but any classes so taken cannot be credited towards a degree.

Matriculation Examinations

Examinations for entrance to the University are conducted three times each year, in May, June and September, under the control of the High School and University Matriculation Examinations Board. The subjects of examination follow. Applications for these examinations should be made about two months before the date of examination to the Secretary of the High School and University Matriculation Examinations Board, Department of Education, Government Buildings, Edmonton. The examinations in May are for the students of affiliated colleges only.

Matriculation Conditions

Students should plan to enter the University with standing in all their Matriculation subjects. Certain students have not had an opportunity in their schools of obtaining instruction, for example, in the languages; accordingly they lack complete matriculation standing and have to carry these subjects as "conditions." To meet the needs of students for whom language conditions are unavoidable, beginners' courses are provided in Latin, French and German, namely: Latin A, French A and German A. However, no student who has the opportunity to prepare these subjects at high school should postpone them until he reaches college. Even though his Matriculation requirements contain only one language, a student may in certain courses be required to study two languages in his first year; such a student should, if at all possible, come to the University prepared in both languages.

Under special circumstances, the University may admit a student who presents a certificate showing standing in all but two of his required subjects, inclusive of the language requirement.

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In the course for the M.D. degree (Faculty of Medicine) the student is not permitted to enter the second year until all the matriculation subjects (including languages) and all the subjects of the First Year have been passed, nor to enter any succeeding year until all the subjects of the previous year are completed. In other faculties promotion from one year to another is under the control of the General Revision Committee, subject to the General Faculty Council, who act at their discretion and with regard to the regulation of the University that specifically no student is allowed to carry a supplemental more than one year old, that is, that no student should enter the third year with a supplemental of the first, or the fourth with a supplemental of the second.

In the courses leading to the degrees of B.Sc. in Architecture and B.Sc. in Engineering (Faculty of Applied Science) the student must clear off all matriculation conditions before entering the Second Year.

Matriculation Scholarships

In 1924 there are offered eight scholarships of \$25 each, given by the Senate and the Board of Governors of the University.

Six of these scholarships will be awarded on the results of the June examinations set by the High School and University Matriculation Examinations Board. The other two scholarships will be awarded on the results of the May examinations held for the affiliated colleges. One of these scholarships is available for those candidates taking the examination in Edmonton, the other for those in Calgary. Only those candidates who write on the whole of the matriculation examination and pass in each subject thereof will be eligible for these scholarships.

The Women's University Club Scholarship of \$25.00 is open to women students only on the results of the June Grade XI (Matriculation) examinations for highest standing in English, History, Latin and French, provided the student passes her other examinations and obtains an average mark of not less than 75 per cent. in the four subjects named. The scholarship is payable after the student is in actual attendance at the University, and is to be applied towards defraying the fees for tuition.

MATRICULATION SCHOLARSHIPS

The P. Burns Scholarship offered by Mr. P. Burns, of Calgary, of the value of \$150 annually. Awarded for the highest standing obtained by a student in Calgary on the Grade XII examinations, and payable after the student is in actual attendance at the University. Winner for 1920, Miss Barbara Villy; for 1921, Geirge Salt; fir 1922, Miss Eva Jagoe; for 1923, Miss Leslie Lillian Calder.

Daughters of the Empire Bursary. A Bursary of \$250 a year for four years, offered by the Imperial Order of the Daughters of the Empire as a part of its War Memorial, awarded to the candidate in Matriculation examinations, who, in the judgment of the Committee, best meets the purpose in view of the foundation of the Bursary. The candidate must be the son or daughter of a killed or permanently disabled soldier, sailor, or member of the air force. It is tenable at the University of Alberta, where a rebate of \$25 on tuition fees is allowed to the holder of this scholarship.

Equivalent Examinations

The Grade IX certificate of Alberta is accepted in the subject of British History, the Grade X certificate in the subjects of English Grammar and Canadian History, the Grade XI certificate pro tanto for the other subjects of matriculation and the Grade XII certificate pro tanto for the first year courses in Arts and Sciences at the University. Requests for exemption from the matriculation examination based on these or other certificates should be addressed to the Registrar, University of Alberta.

Advanced Standing

Any student of another university wishing to be admitted to this university with equivalent standing is required to send with his application:

1. A calendar of the university in which he has studied.
2. A detailed transcript of his record.
3. Honourable dismissal from the university at which he has studied.

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Matriculation Examination Requirements

A.—For students presenting Grade IX and Grade X certificates, the various lists of matriculation subjects are as follows:

I.—In the Faculty of Arts and Sciences. For the degrees of B.A., B.Sc. in Arts, B.Sc. in Household Economics, and B. Com., Grade XI (or Junior Matriculation) in the following subjects:

- 1. English Composition.**
- 2. English Literature.**
- 3. History (General and Canadian Constitutional).**
- 4. Arithmetic.**
- 5. Algebra.**
- 6. Geometry.**
- 7. Latin, or Greek, or French, or German.**

***8 and 9. Two of the following: Physics, Chemistry, Agriculture, a second language from No. 7.**

II.—For B.Sc. in Pharmacy (Faculty of Arts and Sciences) Grade XI (or Jun. Matric.) in the following:

- 1. English Composition.**
- 2. English Literature.**
- 3. History (General and Canadian Constitutional).**
- 4. Arithmetic.**
- 5. Algebra.**
- 6. Geometry.**
- 7. Latin.**
- 8. Chemistry.**
- 9. Physics.**
- 10. French or German.**

***Students presenting two sciences for matriculation must take a beginner's language course in the first year.**

DETAILS OF MATRICULATION REQUIREMENTS

III.—For the licentiate course in Pharmacy (School of Pharmacy). As in I. above.

IV.—For B.Sc. in Architecture (Faculty of Applied Science) Grade XI (or Jun. Matric.) in the following.

1 to 6. As in I. above.

7. French or German.

8. Physics.

V.—For D.D.S. (Faculty of Medicine) Grade XI (or Junior Matriculation in the following:

1. English Composition.

2. English Literature.

3. History (General and Canadian Constitutional).

4. Arithmetic.

5. Algebra.

6. Geometry.

7. Latin.

8. Chemistry.

9. Physics.

10. French or German.

VI.—For LL.B. (Faculty of Law) Grade XI (or Junior Matriculation) in the following:

1. English Composition.

2. English Literature.

3. History (General and Canadian Constitutional).

4. Arithmetic.

5. Algebra.

6. Geometry.

7. Latin.

8 and 9. Two of the following: **Physics, Chemistry, Agriculture**; a second language, **Greek, French, or German**; and the subjects of First Year Arts or Grade XII.

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VII.—For B.Sc. in Engineering (Faculty of Applied Science) Grade XI (or Junior Matriculation) in the following:

1. **English Composition.**
2. **English Literature.**
3. **History** (General and Canadian Constitutional).
4. **Arithmetic.**
5. **Algebra.**
6. **Geometry.**
7. **French or German.**
8. **Physics.**
9. **Chemistry.**

Students presenting evidence of Matriculation and having standing in first year Arts or the following subjects of Grade XII: English, History, Algebra, Geometry, Trigonometry, Physics and one option, will be granted entrance to the second year of the five years course.

VIII.—For M.D. (Faculty of Medicine) Grade XI (or Junior Matriculation) in the following:

1. **English Composition.**
2. **English Literature.**
3. **History** (General and Canadian Constitutional).
4. **Arithmetic.**
5. **Algebra.**
6. **Geometry.**
7. **Latin.**
8. **Chemistry.**
9. **Physics.**
10. **French or German,** and the subjects of First Year Arts or Grade XII.

IX.—For B.Sc. in Agriculture: See under Faculty of Agriculture, page 105.

X.—(a) For the Diploma Course in Nursing (School of Nursing, Faculty of Medicine), Grade X or its equivalent.

DETAILS OF MATRICULATION REQUIREMENTS

- (b) For B.Sc. in Nursing (School of Nursing, Faculty of Medicine), Grade XI or its equivalent.

NOTE.—Prospective students in Nursing should consult the special announcement of the School of Nursing which may be secured on application either to the Registrar's Office or to the Superintendent of Nurses, University Hospital.

B.—For those not presenting Grade IX and X certificates.

- I.—For those intending to take the course leading to B.A., B.Sc. in Arts, B.Sc. in Household Economics, B. Com. or the Licentiate Course in Pharmacy:

1. **English Grammar.**
2. **English Composition.**
3. **English Literature.**
4. **British and Canadian History.**
5. **History** (General and Canadian Constitutional).
6. **Arithmetic.**
7. **Algebra.**
8. **Geometry.**
- 9 and 10. Two of the following: **Latin, French, German, Greek.**
11. One of the following: **Physics, Chemistry, Agriculture**, a third language (to be selected from 9 and 10).

- II.—Those entering upon other courses are required to pass in subjects 1 to 8 inclusive, but there are certain variations in the remaining subjects, as follows:

For B.Sc. in Engineering.—A Modern Language (French or German), Physics and Chemistry, First Year Arts or Grade XII standing in the following subjects: English, History, Algebra, Geometry, Trigonometry, and Physics, and one option will admit to the second year of the five year course.

For B.Sc. in Architecture.—French (or German), and Physics, and certain original drawings (details on application).

For D.D.S., or B.Sc. in Pharmacy.—Latin, Chemistry, Physics, and either French or German.

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For B.Sc. in Agriculture.—See under Faculty of Agriculture, page 100.

For M.D.—As for D.D.S. or B.Sc. in Pharmacy together with the subjects of First Year Arts or Grade XII.

For LL.B.—As in B I. (except that Latin is compulsory) together with the subjects of First Year Arts or Grade XII.

III.—For those intending to take the three years course leading to the degree of B.Hec., the entrance requirement is a Certificate of Qualification from a provincial School of Agriculture. In addition to the recommendation of the principal of a School of Agriculture, candidates for the three years course must produce a certificate of having passed all the regular examinations of the second year at one of the Schools of Agriculture with at least 60 per cent. of the marks in each subject.

Details of Matriculation Subjects

English Grammar.

A general knowledge of the prescribed text with special reference to the detailed analysis of ordinary English passages and to the determining of the grammatical value of words. Time should not be devoted to unusual, obscure or highly idiomatic expressions.

Text-book: *Ontario High School English Grammar* (Canada Publishing Co.).

English Literature—Poetry.

Shakespeare: *Julius Caesar*.

Tennyson: *The Passing of Arthur*.

Selected lyrics (Palgrave's Golden Treasury):

"*Eternal Spirit of the chainless mind*" (Byron).

"*When I have borne in memory what has tamed*" (Wordsworth).

"*O Friend I know which way I must look*" (Wordsworth).

"*If aught of oaten stop or pastoral song*" (Collins).

"*O Wild West Wind, thou breath of Autumn's being*" (Shelley).

"*Ye distant spires, ye antique towers*" (Gray).

"*Of a' the airts the wind can blaw*" (Burns)

"*Why weep ye by the tide, ladie?*" (Scott).

DETAILS OF MATRICULATION REQUIREMENTS

"Our bugles sang truce, for the night-cloud had lower'd"
(Campbell).

"From Stirling Castle we had seen" (Wordsworth).

"And is this Yarrow—This the stream" (Wordsworth).

Note—Choice selections from the above poems should be memorized.

Prose.

Macaulay: *Clive*.

Goldsmith: *The Vicar of Wakefield*.

Collateral Reading.

Irving: *Life of Goldsmith*.

Thackeray: *Esmond*.

Goldsmith: *The Deserted Village*.

Composition and Rhetoric.

Essays based on current topics, history, and subjects chosen from the texts prescribed for collateral reading. Review of the work prescribed for former grades together with Part II of the prescribed text.

Text-book: *Ontario High School English Composition* (Copp, Clarke Co.).

History.

Grade X. British History: British History from 1485 to the present day.

Text-book: *A New History of Great Britain*, Pts. II & III, R. B. Mowat (Oxford University Press).

Grade X requirements for 1923-24. Canadian History and Civics: A brief outline of Canadian History prior to 1759 and a thorough study of Canadian History subsequent to that date.

A careful study of Dominion, Provincial and Municipal Civics.

Text-books: Duncan: *The Story of the Canadian People* (revised edition); Jenkins: *Canadian Civics* (Alberta edition).

Reference: Bourinot: *How Canada is Governed*.

Grade XI. General History: General History to the close of Feudalism (p. 181). Constitutional History of Canada.

Text-book: Botsford: *A History of the World* (Macmillan Co. of Canada); Bourinot: *How Canada is Governed*.

Algebra.

A review of the work of Grades IX and X. Square and cubic roots; quadratics; equations of the second degree in-

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volving one and two unknowns; problems involving quadratics; character of the roots of a quadratic equation; relation between the roots and co-efficients of a quadratic equation and problems to illustrate these relations; graphical solution of simultaneous linear and quadratic equations involving one and two unknowns; surds and surd equations, theory of indices; applications to problems arising in daily life. *Crawford's High School Algebra* (omitting sections 247-254).

Geometry.

Books III, IV, V and Propositions 4-8 inclusive of additional Propositions. Exercises and review. Text-book: Baker's *Theoretical Geometry for Schools*.

Arithmetic.

Review of Fractions and Decimals: Contracted multiplication and division of Decimals.

Percentage: Simple and Compound Interest: Present Worth; Stocks and Bonds; Partnership; Domestic and Foreign Exchange; Partial Payments; Equation of Payments; Life, Accident and Health Insurance; Banking (Savings and Current Accounts).

Mensuration: Sphere; Frustra of Cone and Pyramid. Review Cone, Pyramid, Cylinder, Prism, similar figures.

Ratio and Proportion.

Longitude and Time.

Simple Graphs: Comparison of Magnitudes; relation between two variables such as altitude and pressure, temperature and time, volume and pressure, distance and rate of motion, varying production from year to year. A technical discussion of Axes and Co-ordinates is not intended.

Text-book: *High School Arithmetic* (Hunter Rose & Co.).

Chemistry.

As in the prescribed text. The course shall be conducted experimentally as far as possible. Text-book: *Chemistry, a Text-book for High Schools*, by Cornish (Macmillan Co.).

Agriculture.

No text has yet been authorized. A full outline of the course to be covered is printed separately and may be obtained upon application to the Department of Education.

Physics.

Chapters XVIII-XXIII inclusive; Chapters XXXII-XXXIX inclusive; Chapters XLI-XLVIII inclusive and Chapter L. Text-book: *The Ontario High School Physics* (Merchant & Chant).

DETAILS OF MATRICULATION REQUIREMENTS

Latin.

Grammar and Composition: *Ontario High School Latin Book* (Robertson & Carruthers).

Reading: Cornelius Nepos: *Lives of Miltiades and Epaminondas* (G. H. Nall) (Macmillan Elementary Classics); Ovid: *Selections from Metamorphoses* (Bond & Walpole) (Macmillan Elementary Classics).

Book 3.	Lines 7-130
8.	183-235
8.	618-724
10.	243-294
11.	87-193

The examination in Latin will consist of two papers, one on the Authors and Sight Translation, the other on the Grammar and Composition. One-fifth of the marks for the former paper will be assigned to Sight Translation.

French.

Grammar: New Fraser & Squair Elementary French Grammar, with the following irregular verbs:

Aller, envoyer, acquérir, courir, cueillir, dormir, faillir, fuir, haïr, mourir, ouvrir, tenir, venir, vêtir, battre, boire, conclure, conduire, confiner, connaître, coudre, craindre, croire, croître, dire, écrire, faire, lire, mettre, naître, plaire, prendre, resoudre, rire, suivre, traire, vaincre, vendre, vivre, recevoir, devoir, asseoir, falloir, mouvoir, pleuvoir, savoir, valoir, voir, vouloir.

"Anecdotes" (pages 190-208) may be omitted or used by the teacher as illustrative material.

Reading and Composition: Translation of the prescribed French Literature; translation at sight of passages of average difficulty from texts not prescribed; simple written composition; special emphasis in oral composition.

Text-book: Labiche: *La Poudre aux Yeux*.

German.

Grammar: *First Year German* (Collar): Review work of preceding grades and cover remainder of text-book.

Reading and Composition: Translation of the prescribed literature; translation at sight of passages of average difficulty from texts not prescribed; simple written composition and special emphasis on oral composition. Text-book: Ernst: *Flachsmann als Erzieher* (Ginn & Co.).

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Examinations in French and German in Grade XI shall consist of three parts: 1st, a written test in Grammar and Composition; 2nd, a written test based on the prescribed Authors and Sight Translation; 3rd, an oral test in Conversation and Dictation.

The marks shall be allotted as follows: 50% to the paper on Grammar and Composition, 25% to the paper on Translation and 25% to the oral test.

Scholarships, Prizes and Medals

Scholarships

The Women's University Club Scholarship. This scholarship, of the value of \$50, will be awarded to the woman student who takes the highest standing in the work of the First Year of the Faculty of Arts and Sciences, provided that, to secure the award, an average of not less than seventy-five per cent. be obtained on the work of the year. Further, the award will be contingent upon the student's proceeding with the work of the second year and will be paid only after the student has been in actual attendance in the second year of her course.

The Scholarships of the College of Physicians and Surgeons of the Province of Alberta. These are five in number and will be awarded as follows:

1. One to the student taking the highest average mark in the work of the freshman year.
2. One to the student taking the highest average mark in all courses in pure Physiology of the second and third years.
3. One to the student taking the highest average mark in all the courses in Anatomy of the second and third years.
4. One to the student taking the highest average mark in Surgery at the end of the final year.
5. One to the student taking the highest average mark in Medicine at the end of the final year.

Pharmaceutical Association Scholarships, offered by the Alberta Pharmaceutical Association.

1. A scholarship of forty dollars to the student making the highest average mark in all subjects of the first year of the Licensing Course, provided that the mark obtained in any subject does not fall below 60%.
2. A scholarship of forty dollars to the student making the highest average mark in all subjects of the third year of

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the Degree Course, provided that the mark obtained in any subject does not fall below 60%.

The Aikins Scholarship in English Language and Literature:

1. This scholarship, the gift of Sir James Aikins, is of the value of \$125.00 per annum. It is open to graduating students who have pursued the study of English throughout the first three undergraduate years—the scholarship being tenable during the fourth year; provided that such students shall have obtained satisfactory standing in English 1 or its equivalent, and not less than seventy-five per cent. in each course in English taken during the second and third years and shall have obtained high standing in their other subjects.

2. The selection of the scholar will be made by a committee appointed by the President; the committee to consider not only the academic standing of the candidate, but also evidence of intellectual grasp and of proficiency in expression, as displayed in such essays or other tests as the committee may impose.

Prizes

The Jane Alexander Memorial Prizes. These are offered annually by Professor W. H. Alexander, in memory of his mother. The subjects are:

1. Latin Prose Composition and Latin Sight Translation (by special examination).
2. Geology, on the basis of the regular tests and examinations in Geology 51 and 52.

The Gordon Stanley Fife Memorial Prize, offered by Professor A. L. Burt, in memory of his colleague, and to be awarded to the graduating student who has taken the highest average mark in two or more Senior History Courses.

Prize in the History of Medicine, offered by Dr. H. C. Jamieson for an essay on some phase of the earlier development of Anatomy or Physiology.

The Harold Waldo Huestis Memorial Prize. A prize to the value of \$25, to be awarded each year, to the second year student, taking five full courses, who has obtained the highest mark in English of the second year, provided that the student has displayed marked proficiency in English Composition.

PRIZES

Prizes in Mathematics, of the value of \$10 each, offered by Dr. E. W. Sheldon and Mr. C. E. Race:

1. A prize open to students taking Mathematics 3, the award being based on the marks made in regular work of the year as well as in a special problem paper.
2. A prize for those students in Mathematics 1 who are not taking Mathematics 3, the award to be based on the marks in Mathematics 1 and in a special problem paper.

The Samuel Richard Hosford Memorial Prize. A prize of books valued at \$15, to be awarded to the undergraduate student making the best record in English 53.

The Valée French Prize. The Vallée French Prize in books, offered by Professor A. Valée, of Laval University, in remembrance of the Honourable P. J. O. Chauveau, first Prime Minister of the Province of Quebec, open to undergraduates registered in French 1—3, and to be awarded on the results of the year's work.

Société du Parler Français Prize. A prize of books of the value of ten dollars, offered by the Société du Parler Français, to the student enrolled in French 4—5 who makes the best average record in the test and final examinations in this course.

Le Comité Permanent de la Langue Française Prize. A prize of books of the value of fifteen dollars, offered by Le Comité Permanent de la Langue Française, to the student making the best record in French 54.

Historical Club Prize. An annual prize of books of the value of fifteen dollars, offered by the Historical Club of the University of Alberta, to the student making the best record in History 2, provided such student receives first class standing on his year's work in History and pass in all other subjects.

Stutchbury Research Prize. A prize to the value of \$25.00 offered by Howard Stutchbury, Esq., to be awarded at the Spring Convocation to a fourth year student in the departments of Geology or Mining Engineering for a paper on original work. Originality of method and of presentation will be the basis of award which will be made by a committee of three, chosen from the members of the Scientific and Industrial Research Council of Alberta.

Awards of The Association of Professional Engineers of Alberta. Awards of \$25.00 cash to be made to one student

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in each of the Civil, Electrical and Mining Engineering Departments on the basis of individual talent, application and diligent study. The Association also offers a prize of \$25.00 for the student making the best record in the first three years of Applied Science, who, after the completion of his work in the University of Alberta, gives proof of registration at some other University in Mechanical Engineering.

Canadian Institute of Mining and Metallurgy Prizes. A prize to the value of \$25.00 to the student in the fifth year of Mining Engineering who presents the best description of an actual piece of work in Mining, Engineering, research or otherwise, that the student has been engaged on or assisted in.

Also a prize of \$15.00 open under the same conditions to students in the fourth year of Mining Engineering.

The Coté Prize. A prize of books offered by Madame Jean Coté to the non-French speaking undergraduate student in French 51, who, during the current session has, in the judgment of the Faculty Council, made the most progress in French.

The Wells Prizes of twenty-five dollars each, for proficiency in French; the prizes to be offered only to students whose native language is not French, one prize to be given to third year students and one to fourth year students, taking senior work in French, both prizes to be awarded on the basis of a special oral and a special written examination.

Carswell Prizes in the Faculty of Law. Three prizes are offered annually by the Carswell Company, Limited, Law Publishers, of Toronto. These are to be awarded to the students obtaining the highest general standing in their respective years.

To the student securing the highest average in the first year, books to the value of Twenty Dollars.

To the student securing the highest average in the second year, books to the value of Thirty Dollars.

To the student securing the highest average in the third year, books to the value of Fifty Dollars.

The Halley Hamilton Gaetz Prize, offered by Mr. W. R. Wees, B.A. '23, consisting of a set of books, to be awarded to the student in junior years taking the highest marks in Philosophy 2, the granting of the prize to any student to be conditional his registration in the full course of his year, and to his obtaining not less than 80% of the possible marks in the subject.

MEDALS

Medals

1. **The Governor-General's Gold Medal**, offered by His Excellency the Governor-General of Canada, for the highest standing in the two senior years of the Faculty of Agriculture.

2. **The Charles Allan Stuart Gold Medal**, offered by the Honourable Charles Allan Stuart, Chancellor of the University, and open for competition to students in the graduating year, reading for honours in the Department of Classics.

3. **The Alexander Cameron Rutherford Gold Medal**, offered by the Honourable Alexander Cameron Rutherford, and open for competition to students in the graduating year, reading for honours in the Department of English.

4. **The Women's University Club Gold Medal**, offered by the Women's University Club of Edmonton, and awarded to that student in the graduating class of the Faculty of Arts and Sciences, general course, who takes the highest standing in the eight senior courses required in the third and fourth years, provided that an average mark of not less than seventy-five per cent. be obtained.

5. **Le Club Laverendrye Gold Medal in French**. This medal is offered annually by Le Club Laverendrye and awarded to the student who receives the highest standing in the general courses in French of the third and fourth years, provided that the student's record is considered satisfactory by the Council of the Faculty of Arts and Sciences.

6. **The Lieutenant-Governor's Gold Medal** for the study of Shakespeare.

This medal is open for competition to students in any department of the University and in any one of the affiliated colleges, but not to students of graduate status. The award is based upon:

- (a) An examination upon a small group of Shakespeare's plays, the titles to be announced in each spring for the ensuing year.
- (b) An essay on a subject selected by a representative committee nominated by the President of the University.

For 1924-5, the plays under (a) are: Shakespeare's *As You Like It*, *Much Ado About Nothing*, *Twelfth Night* and Congreve's *Way of the World*. The essay subject under (b) for 1924-25 is: "A Contrast between Shakespeare's *As You Like*

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It and Congreve's Way of the World." For 1924-25 the committee consists of Dr. Broadus, Dean Kerr and Dr. Gordon.

8. **Chief Justice's Gold Medal**, offered by Chief Justice the Honourable Horace Harvey, for highest standing in the work prescribed for the LL.B. degree, provided that the student obtains an average of not less than 75%.

9. **The James Ramsey Gold Medal**, offered by James Ramsey, Esq., and open to students in the graduating year, reading for honours in the Department of Mathematics.

10. **The Moshier Memorial Medal**, offered by the Volunteer Overseas Medical Officers' Association of Edmonton, in memory of the late Lieutenant-Colonel H. H. Moshier, to be awarded for general proficiency in the Faculty of Medicine, upon completion of the courses offered at this University.

11. **Pharmaceutical Association Medals**, offered by the Alberta Pharmaceutical Association.

- (a) A gold medal to the student making the highest average mark in all subjects of the final year of the Licentiate Course, provided that the mark obtained in any subject does not fall below 60% and that the average obtained in all subjects is not less than 75%.
- (b) A gold medal to the student making the highest average mark in all subjects of the final year of the Degree Course, provided that the mark in any subject does not fall below 60% and that the average obtained in all subjects is not less than 75%.

Graduate Fellowship

The Lloyd Hartnoll Bishop Memorial Fellowship in English Literature

A fellowship in English Literature has been founded by E. T. Bishop, Esq., to be known as the Lloyd Hartnoll Bishop Memorial Fellowship, and to be conferred on the graduating student who, during his undergraduate course, has shown unmistakable evidence of literary ability. The present emolument of this Fellowship is \$200.00. Attention is called to the fact that this is a special award and not necessarily given each year.

FELLOWSHIP

Daughters of the Empire Post-Graduate Overseas Scholarship

This scholarship was founded by the Imperial Order, Daughters of the Empire, as part of the War Memorial of the Order. It is of the value of \$1400.00 tenable for one year in any British University, the subjects of study being specified as British and Imperial History, the economics and government of the Empire and Dominion, or any subject vital to the interest of the Empire.

The selection of a candidate will take place during the month of November. The candidate selected must be prepared to begin his or her course in Great Britain in the following autumn.

Candidates may be men or women. They must be British born, naturalized allies, or naturalized neutrals, with at least five years' residence in Canada, and unmarried. Except in the case of a returned soldier, sailor or airman, they must have passed their 19th but not their 27th birthday in October of the year during which they begin their course. In the case of a man who has served in the Great War, he must not have passed his 29th birthday in October of the year in which he begins his course. Each candidate must hold a degree from a recognized University or degree-granting college in the province in which he or she is making application, or be in his or her final year proceeding to a degree, and shall be entitled to apply in the province in which the University from which he or she graduates is situated, irrespective of his or her place of residence in Canada. In provinces where there is no University, the War Memorial Committee in that Province shall grant the scholarship to a man or woman from that province who has graduated from any Canadian University or College, or is in his or her final year proceeding to a degree. Candidates from a province having no university may apply only in that province, not in the province where they are attending college or have taken a degree.

In choosing the scholars, the Committee of Selection will give consideration not only to literary and academic attainments, but also to personal character and physical fitness. If possible personal interviews with the candidates will be arranged. Other conditions being equal, preference will be given to a returned soldier, his sister, son or daughter.

The following students of the University of Alberta have obtained this scholarship:

1922—Bertha Lawrence.

1924—John Wesley McClung.

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Travelling Scholarship of the Federation of University Women in Canada

The scholarship of the Federation of University Women in Canada, of the value of \$1,000, available for study or research work, is open to any woman holding a degree from a Canadian University. In general preference will be given to those candidates who have completed at least one or two years at graduate study and have a definite research in preparation. The award is based on evidence of character and ability of the candidate and promise of success in the subject to which she is devoting herself.

Application is to be made by letter to the Convener of the Scholarship Committee, Mrs. Douglas Thom, 2220 16th Avenue, Regina, Saskatchewan, not later than February 1st.

The letter of application should contain an account of the applicant's educational training and a statement in full of the plan of study or research she intends to pursue. This information should be accompanied by:

1. A written statement from the President of the College or University awarding the degrees held by the applicant to the effect that her application as a suitable candidate is approved.

2. Testimonials as to her health, character, ability and scholarship. All testimonials and references should be in writing. The committee will assume no responsibility for making enquiry beyond the papers submitted.

3. Theses, papers or reports of investigation published or unpublished.

All papers submitted by the applicant will be returned if postage is sent for that purpose. Confidential letters will be kept.

The choice of the University at which the successful candidate shall pursue her study or research work is left to the Committee of Selection in consultation with the candidate.

The scholarship is payable in two equal instalments on July 1st and January 1st by the Treasurer of the Federation, provided the successful applicant sends her address for those dates.

At the end of her tenure, the candidate shall send a report of her work, together with a statement of its worth from the professor or other authority conversant with her research to the Convener of the Scholarship Committee.

RHODES SCHOLARSHIP

The Rhodes Scholarship

There is available for the Province of Alberta each year one Rhodes Scholarship.

This Scholarship is of the value of £300 a year for three years, subject to the continued approval of the College at Oxford of which the Scholar is a member. In addition a Scholar will receive, until further notice, an annual bonus of £50.

The following conditions under which candidates are eligible apply throughout Canada:

- (1) Candidates must be British subjects, with at least five years' domicile in Canada, and unmarried. They must have passed their nineteenth, but not have passed their twenty-fifth birthday, on October 1st of the year for which they are elected.
- (2) Candidates must be at least in their Sophomore Year at some recognized degree granting University or College of Canada, and (if elected) completed the work of that year before coming into residence at Oxford.
- (3) Candidates may compete either in the Province in which they have acquired any considerable part of their educational qualification, or in the Province in which they have their ordinary private domicile, home or residence. Committees shall be responsible for deciding whether a candidate qualifies under the provisions of this clause.

Subject in all cases to review and confirmation by the Trustees, appointments will be made by local Committees of Selection nominated by the Trustees. The Committee of Selection for the Province of Alberta is as follows:

The Honourable R. G. Brett, Lieutenant Governor, Chairman.

The Honourable Horace Harvey, Chief Justice.

The Honourable Perren Baker, Minister of Education.

The Honourable C. A. Stuart, Chancellor.

Dr. H. M. Tory, President of the University.

Professor A. L. Burt, University of Alberta.

Secretary of the Committee, D. S. MacKenzie, Esq.,
Edmonton.

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The Trustees desire that the selection of Rhodes Scholars shall be carried out with careful regard to the definition of fitness given Mr. Rhodes in his will, viz.:

- (a) Ability and scholastic attainments;
- (b) Force of character and capacity for leadership as shown by "manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindness, unselfishness and fellowship."
- (c) Physical vigor, as shown by "fondness of and success in manly outdoor sports."

Mr. Rhodes wished his Scholars to be chosen especially for the possession of those mental and moral qualities which would be "likely in after-life to guide them to esteem the performance of public duties as their highest aim." He explained for the guidance of those who would have the choice of Scholars that his ideal Scholar would be characterized by a strong combination of the first two sets of qualities. While he also desired that all his Scholars should have manliness and physical vigor, his main emphasis was laid upon intellectual and moral force, and he did not intend that his Scholars should be chosen for "athletic" pre-eminence in the narrower sense of that term. The Trustees hope that Committees will bear these wishes of the Founder most carefully in mind when determining the weight to be attached to the different qualities in each of the candidates who offer themselves for selection. Some distinction either of character or of intellect should be looked for, and close attention should be given to Mr. Rhodes' wish that the performance of public duties should be his Scholars' highest aim.

The Committees will summon to a personal interview such of the Candidates as they choose. Save under exceptional circumstances, no candidate will be appointed without such an interview. Should the interview be dispensed with, a statement of the reasons will be forwarded to the Trustees.

Poverty does not give any special claim to a Scholarship. The Trustees desire that the strongest candidate be appointed, irrespective of his financial circumstances.

In the absence of strong candidates, the Trustees hope that the Committees will make no appointment.

Committees are responsible for satisfying themselves, before nominating a candidate to a Scholarship, that he fulfils the conditions as regards age, domicile, academic qualifications, etc. No exceptions to the age conditions can be admitted.

RHODES SCHOLRSHIP

The following students of the University of Alberta have obtained this Scholarship:

- 1913—Walters Farrel Dyde;
- 1915—Henry Grattan Nolan;
- 1917—Henry Alexander Dyde;
- 1918—Alan Burnside Harvey;
- 1919—Daniel Roland Michener;
- 1920—Walker Dunham;
- 1921—George Victor Ferguson;
- 1922—Stuart Perry Hamilton;
- 1923—Robert Lincoln Lamb;
- 1924—John McIntyre Cassels.

Applications, with all the required material, must be in the hands of the Secretary of the Committee of Selection on or before a date fixed from time to time by the Trustees. At present this date is **October 20th**.

Application forms and information regarding documents to be submitted may be obtained from the Secretary.

The 1851 Exhibition Science Research Scholarship

Three of these Scholarships are granted each year in Canada and may be applied for by students of eight Canadian universities, of which this University is one. They are of the value of £250 per annum for two, or in rare instances, three years, together with certain possible allowances for fees and travelling expenses. The object of the Scholarship is "to enable students to continue the prosecution of science with a view of aiding in its advance or in its application to the industries of the country." Open to students of not less than three years' standing who have shown evidence of capacity for original research and is tenable at any University or other institution approved by the Committee. In 1923 this scholarship was awarded to Julius Ferdinand Lehmann.

First Class General Standing

Those students who, in the work of any one year, attain an average mark of not less than eighty-five per cent., are awarded First Class General Standing.

University Regulations

Fees

The University reserves to itself the right to change these fees from year to year without notice.

I.—In Arts (including degree courses in Pharmacy, Commerce, and Household Economics):

(a) Undergraduates and conditioned students:	
Instruction per session	\$ 50.00
Students' Union (Compulsory)	7.00
"A" Language courses, each	10.00
(b) Special and Partial Students:	
Registration Fee	3.00
Instruction per session per course	12.50
*Students' Union (compulsory)	4.50
(c) Summer Students:	
Registration Fee	2.00
Instruction per session per course	6.00

II.—In Applied Science:

(a) Undergraduates and Conditioned Students:	
Instruction per session, first year	50.00
Instruction per session, second and third years	85.00
Instruction per session, in subsequent years	100.00
Students' Union (compulsory)	7.00
(b) Special Students:	
Registration Fee	5.00
Instruction per session, per course	22.00
*Students Union (compulsory)	4.50

III.—In Law:

Instruction per session	60.00
Instruction for Extra Mural students in Calgary and Edmonton	20.00

FEES

Examination Fee (payable to Law Society)	15.00
*Students' Union (compulsory for students in attendance)	7.00
IV.—In Medicine and Dentistry:	
Instruction per session, first year	110.00
Instruction per session, in subsequent years	160.00
Students' Union (compulsory)	7.00
V.—In Accountancy (Evening Classes):	
Instruction per session (Intermediate course)	25.00
Instruction per session (Final course)	50.00
VI.—Pharmacy Licensing Course:	
Instruction per session, first year	60.00
Instruction per session, second year	85.00
Students' Union (compulsory)	7.00
VII.—In Agriculture (including the three year course in Household Economics)	40.00
*Students' Union (compulsory)	7.00
VIII.—Graduate Courses:	
Master of Arts (per subject)	10.00
Bachelor of Divinity	15.00
Bachelor of Education (per subject)	10.00
IX.—Medical service fee (required of all students)	5.00
X.—Caution Money: Every student is required to deposit \$5.00 caution money to cover damages done to furniture, apparatus, books, etc. This amount, less any necessary deductions, will be returned at the end of the session. Breakages exceeding this amount must be paid for before the student is permitted to take any examination.	
XI.—For Visiting Certificates	3.00
XII.—For Transcript of Record	2.00
XIII.—For Supplemental Examinations:	
Each subject	3.00
For Special Supplementals:	
First subject	10.00
Each additional subject	5.00

*Special students taking two full courses in the University have at registration the option of paying the full Union fee of \$7.00, entitling them to full voting privileges.

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XIV.—For Degrees (whether in course or ad eundem):

B.A.	10.00
B.Sc. in Arts	10.00
B.Sc. in Pharmacy	10.00
B.Sc. in Household Economics	10.00
B. Com.	10.00
B.Sc. in Applied Science	10.00
M.A.	10.00
M.Sc.	10.00
M.D.	10.00
LL.B.	10.00
B.S.A.	10.00
B.D.	10.00
B. Educ.	10.00

XV.—For Diploma in Pharmacy 10.00

XVI.—Library Fee (required of all students):

1. For students following full undergraduate courses	5.00
2. For graduate students and those following teachers' courses, per year	2.50

Room and Board

Room and Board in residences, October 1st to May 1st	\$280.00
Board only, payable in advance, per month	28.00
Meal ticket (21 meals)	7.75

Registration

There are certain forms to be filled out by applicants for enrolment in the University. A new student should secure early in the summer an application form from the Registrar of the University. Moreover, the student should himself write to the Registrar of the Department of Education of the Province in which he obtained his preliminary education, not later than July 15th, asking him to send directly to the Registrar of the University a confidential transcript of the complete High School record of the applicant, including Matriculation standing. This should be done to avoid delays embarrassing both to the student and the University.

ATTENDANCE

The applicant for entrance to the First Year, having already sent in his application form, will complete his registration in conference with advisers at the University on Friday and Saturday, September 26th and 27th.

Students are required to register for courses in which they are deficient before registering for other courses. The Faculty Councils reserve the right to adjust courses to meet the requirements of the time-table. The programme of work for which a student seeks registration is in every case subject to the approval of the Registrar and the Faculty concerned.

Attendance and Lateness

Strict attendance rules calling for close attendance upon lectures from the beginning of the session are enforced. Late entrance is inadvisable, because a bad start in his courses seriously affects the student's work and may even result in the loss of his whole year.

Students are required to register **in person** on the dates specified in the front of the Calendar.

Registration after the first day of lectures will be permitted only upon the following conditions:

- (a) Illness, accident, family affliction, employment under contract, or other exceptional circumstances, provided that any application for late admission shall be accompanied by a confirmatory certificate, and
- (b) The payment of a special registration fee of \$3.00.

No student will be permitted to take the final examination in any course if his absences exceed ten periods in courses of three periods a week throughout the session, six periods in courses of two periods a week, or four periods in courses of one period a week. Absences are counted from the beginning of the term.

Students desiring to present excuses for absence on the ground of sickness or physical disability must, within one week of the date when that absence occurred or when the period of absence terminated, obtain absence cards at the office of the Registrar. The Registrar will promptly forward to the Director of Medical Services the names of such students and the dates for which they claim exemption, and upon the endorsement of the Director of Medical Services, such excuses will be filed to constitute part of the year's attendance record. Absence cards are required for each absence, even in the case of students suffering from chronic or recurrent dis-

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abilities. No other form of excuse in regard to sickness or physical disability will be accepted.

Excuses for absence on the ground of domestic affliction must be presented to the Registrar direct and also within one week as above specified. Any other excuse which a student cares to present must be made within the same time limit to the Registrar in person, and the judgment of that officer upon its validity shall be final, subject to an appeal to the General Faculty Council.

Students who are late for any lecture or university exercise will be marked absent upon the records of the instructor in charge, unless at the end of the period in question they account satisfactorily to the instructor for their lateness, (in which case he will, without destroying the mark of absence, indicate his acceptance of the excuse by making an X over the a). The decision of the instructor shall be final, subject only to an appeal to the Committee on Examinations.

Students desiring leave of absence in any given course must communicate their desire to the Registrar. When such leave of absence has been granted, the student is exempted from the operation of the attendance rule above.

Examinations

The University examinations are conducted by a University Examining Board appointed by the Senate and are under the direction of the Committee on Examinations.

Sessional Examinations

(a) In Junior courses, as a rule, there are held two one-hour tests and one final examination. Fifteen per cent. of the whole credit in the course is assigned to each test. In English 1, however, and in the composition courses in French, German, Greek and Latin, tests are replaced by weekly exercises throughout the year, and to these exercises is assigned fifty per cent. of the whole credit in the course. The same arrangement exists with regard to junior courses in Mathematics, in History 1, and in Physics 1, where regular weekly exercises and short problem papers supplement the normal test papers.

(b) In certain senior courses the test examination method is followed, and fifteen per cent. of the whole credit in the course is assigned to each test. In other senior courses the

EXAMINATIONS

assignment of thirty per cent. for term work is allotted to essays and practical examinations. In certain senior courses, subject to the approval of the General Faculty Council, term tests may be eliminated and the evaluation be on the final examination alone. Announcement is made at the beginning of the session as to the policy to be pursued by each department in this respect.

(c) In each course there is held a final examination. Seventy per cent. of the whole credit in the course is assigned to this examination, except in the case of certain junior courses referred to in paragraph (a) where the allotment is fifty per cent. only. The final examinations are held at the end of the session except in courses completed before Christmas; in such courses the final examinations are held during the last week of lectures in December. In these courses the allotment of marks is seventy per cent. to the final examination and thirty per cent. to the test.

(d) When a student is absent from a test his mark for that test is zero. However, in case of illness or domestic affliction an application for aegrotat standing (i.e., an allowance of 50 per cent. for a test missed by illness, if required for a pass) will be considered if such application is made immediately, in writing, to the Registrar. In the case of illness causing absence from final examination, the general rule is that supplementals in September are granted to students of the first and second years whose term record is satisfactory. In the case of senior students, the faculty may grant aegrotat standing under similar circumstances.

(e) When intercollegiate games or conferences fall within any period of tests, members and officers of the teams and official delegates to conferences shall, at least one week before the beginning of the test period, make a request in writing to the Registrar in order that a readjustment of the timetable may be considered.

(f) In the publication of standing in the various courses, students are grouped by classes, the first class comprising those who have obtained eighty-five per cent. and over, the second class, those who have obtained between sixty-five and eighty-four per cent., and the third class, those who have obtained between fifty and sixty-four per cent. Fifty per cent. is the minimum for a pass.

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(g) Final examination papers may be re-read on an appeal, accompanied by a fee of \$5, being made to the Registrar within sixty days after the publication of the results, the fee to be returned if the appeal is sustained and the student passed in the course.

Supplemental Examinations

Supplemental examinations are conducted by the University in September of each year. Students who have failed in any course the preceding year but whose attendance record was satisfactory may apply for permission to take supplementals. In reckoning standing as a result of a supplemental examination, the credits already obtained in the tests will apply as described above under Sessional Examinations. Students neglecting to take or failing to pass the supplemental examination are required to repeat the course. A fee of \$3 is charged for each of these supplemental examinations. For any special examination granted by a Faculty Council, to be held at any other time than the regular date for supplemental examinations a fee of \$10 is charged for the first subject and \$5 for each additional subject taken at the same time.

Special supplemental examinations are granted (by the Committee on Examinations) only after most careful consideration of the reasons for failure to write at the regular time for supplementals. In the case of illness, the application must be accompanied by a medical certificate, and in the case of employment under contract, by a statement from the employer certifying the date on which the contract expired.

Applications must be made before the tenth day of October, and these examinations, if granted, shall be conducted as soon as possible thereafter, at dates determined by the Committee on Examinations.

Either by statutory provision or by agreement the examinations for the right to secure registration with the following professional societies in the Province of Alberta are under the control of the University: —

- The Alberta Association of Architects.
- The Alberta Land Surveyors' Association.
- The Alberta Dental Association.
- The College of Physicians and Surgeons of Alberta.
- The Law Society of Alberta.
- The Alberta Pharmaceutical Association.
- The Institute of Chartered Accountants of Alberta.

DISCIPLINE

The Association of Registered Nurses of Alberta.
The Association of Professional Engineers of Alberta.
The Veterinary Association of Alberta.
The Alberta Optometric Association.

Information with respect to these examinations can be obtained on application to the Registrar.

Discipline

The Provost is the chief disciplinary officer of the University. He exercises general supervision over the conduct and welfare of the students, especially with regard to the students in residence.

By a resolution of the Senate, a Committee on Student Affairs has been constituted as follows: "The President of the University, the Chancellor, the Chairman of the Board, the Provost, one member to be elected from each Faculty; two members to be elected from the Senate (these not to be Faculty representatives); the Adviser to women students; the president of the Students' Union; the president of the Athletic Society; the president of the Literary Department of the Students' Union; the president of the Wauneita Society; the editor-in-chief of "The Gateway"; three members to be elected from the Students' Council."

Under the same resolution, the duties of this committee are:

(1) "to deal with

- (a) all matters referred to in the University Act, Article 41, subsections 18 and 19;
- (b) all other matters relating to students' interests not therein referred to provided that in event of any decision of this committee being challenged by a non-student member, the decision must, to be valid, be ratified by a majority of the non-student members present; provided further that the right of appeal to the Senate against any such decision shall lie with the student members."

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- (2) for misconduct in the lecture-room, a student may be required by the instructor to leave the lecture-room. Persistent misconduct shall be reported to the President of the University, who may suspend from lectures pending the action of the Committee on Student Affairs.
- (3) In all cases of discipline involving offences against the student body, a student may appeal from decisions of that body or of any court constituted by it to the Committee on Student Affairs.
- (4) No student shall be permitted to continue in attendance at the University whose presence is for any cause deemed by the Committee on Student Affairs prejudicial to the interests of the University.
- (5) All regulations affecting the Students' Union and the Students Court are subject to the approval of the Committee on Student Affairs.

Athletics

The following disciplinary ruling with regard to Athletics, submitted by the Faculty of Arts and Sciences and the Students' Union, was adopted by the Senate at its meeting of March 31st, 1911:

"Hereafter no persons except **bona fide students who are** in attendance at the University, or at one of the group of organized affiliated colleges carrying full work and whose scholastic record is certified as satisfactory by the Faculty Council of the University or by the respective colleges in which they are registered, shall be permitted to play on or be officers of any athletic team representing the University of Alberta."

Satisfactory scholastic standing shall be understood, in general, to mean passing on three-fifths of a full year's course of lectures of university grade.

The Faculty Council has entrusted to the Committee on Scholastic Standing the administration of these regulations which have been enlarged to include the following activities:

1. Athletics: All competitions with outside organizations whether conducted within or outside of the University.
2. Dramatic Performances: (a) The annual play of the Dramatic Society, (b) the French play.

RESIDENCES

3. Debates: All debates with outside organizations, whether conducted within or outside of the University.
4. Such other activities of general interest as may be submitted to the Faculty for its approval from time to time.

By **bona fide** students shall be understood:

- (a) Students who are doing full undergraduate work in the University.
- (b) Graduate students in attendance following any full course of studies leading to a degree.
- (c) Students in affiliated colleges carrying a full year's work leading to a diploma or certificate and taking two full courses of university grade in the University.

Withdrawal of Students

In accordance with the regulation of the Senate, passed May 11th, 1921, a student whose record in the class-room, in tests, or in final examinations is unsatisfactory, may at any time be required to withdraw from the University.

Residences

Residential accommodation is provided in the University for four hundred students. All students not living with parents or guardians must reside in the University residences or in places approved of by the University authorities.

Rooms will be assigned by the Provost and applications for reservations, accompanied by twelve dollars (\$12.00), must be in the hands of the Bursar by September 5th. Reservations will not be held after September 29th, unless arrangements are made with the Bursar.

Each student to whom a room is assigned will be required to deposit one dollar (\$1.00) for keys and will receive a red ticket showing name, number of room, and date of entry. Upon presentation of this ticket to the House Superintendent, keys will be issued. Students vacating rooms during, or at the end of the term, must return this red ticket to the Cashier, signed by the House Superintendent, showing date of leaving, in order to obtain any rebate or deposit on keys.

Students must notify the Bursar before vacating rooms, otherwise no rebate will be considered. No exchange of rooms will be allowed unless arrangements are made with the Bursar and approved by the Provost.

UNIVERSITY OF ALBERTA

Room and Board are payable in advance. Arrangements for monthly payments may be made with the Bursar. Students leaving the University during Christmas holidays will be allowed rebate at the rate of ninety cents per day for Board only, from December 23rd to January 2nd (inclusive), but application must be made to the Bursar before leaving so that rebates may be arranged. Students arriving before October 1st or leaving after May 1st will be charged at the rate of \$1.35 per day.

Students not residing in the University residences may obtain meals in the University dining room by purchasing red and white tickets from the Cashier at the rate of twenty-eight dollars (\$28.00) per month, which arrangement is presumed to continue throughout the term 1924-25 unless the students notify the Bursar otherwise. Students may also obtain white tickets for twenty-one meals at the rate of \$7.75 per ticket which may be used at any time.

The conduct of students in residence is subject to the authority of the House Committee, under the Board of Governors. This committee consists of the Provost, the Adviser to Women Students and two resident students from each of the University Halls. A special sub-committee of the House Committee, under the direction of the Adviser to Women Students will deal with matters relating solely to the women students. The resident members shall be fourth year or graduate students and shall be elected not later than two weeks after the beginning of the session. Any vacancy thereafter occurring shall be filled at a special election to be held within two weeks after the occurrence of the said vacancy. Only students who have been in residence at least one year shall have the right to vote at elections of members of the House Committee.

Medical Services

All students registered in the University are required by the Students' Union to pay an annual fee of five dollars (\$5.00), which is applied to the maintenance of a Medical Service Fund. This trust fund is administered by a committee consisting of the President of the University, the Provost, the Medical Director and the President of the Students' Union. In return for the fee paid, students are entitled to medical treatment under such conditions and provisions as

ACADEMIC COSTUME

have been outlined in specially printed pamphlets, copies of which will be furnished to students at the time of registration. Every student should read these instructions carefully. Students must secure from the Bursar a medical service card to be presented to the Director on demand.

Student Functions

All student functions are conducted under the general supervision of the Provost, and except by special permission are held in the University buildings. A written communication for permission to use a University building for such purpose must be addressed to the Provost at least ten days before the date set for any function.

Meetings of Student Societies

Applications for the use of rooms for students' meetings must be made to the Registrar.

Academic Costume

All gowns are to be of the customary Cambridge shape: i.e., for undergraduates, a black stuff gown not falling below the knee with round sleeve cut above elbow; for bachelors, a black stuff gown falling below the knee with full sleeve cut to elbow and terminating in a point; for masters, a black stuff or silk gown falling below the knee with long sleeves with semi-circular cut at bottom.

Hoods are to be of the Oxford pattern, except those for the doctorate, which shall be of the Cambridge form.

Bachelors' and Masters' hoods are to be of a spruce green silk, with, for bachelors, a border ($1\frac{1}{2}$ inches each way); for masters, a full lining of the color distinctive of the faculty.

The faculty colours are:

For Arts (including LL.D.)	Green and White
For Science	Light Green
For Law	Cream
For Agriculture	Pale Blue
For Education	Lilac
For Medicine	Rose
For Dentistry	Buff
For Pharmacy	Cinnamon
For Divinity	Purple
For Household Economics	Pink
For Commerce	Silver Gray

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Doctors' hoods are to be of scarlet silk, with a full lining of the respective faculty colour, the M.D. hood to be of the master's pattern.

Doctors are entitled to wear a full dress scarlet robe faced with silk of the respective faculty colour.

All caps are to be of the ordinary black trencher shape with black tassels, with a black velvet cap with gold cord for doctor's full dress.

Degrees in Absentia

Graduands who are unable to be present at Convocation should make application to the President for the degree to be conferred **in absentia**, giving their reason for absence, three days before the date of Convocation.

For the convenience of students, the University maintains a book store where text-books prescribed in the University calendar may be obtained. Gowns, drawing material, athletic costumes and other accessories are also kept in stock.

Organization of Faculties

The University reserves the right to modify or withdraw for the session any of the courses here outlined.

FACULTY OF ARTS AND SCIENCES

The courses leading to the degrees of B.A., B.Sc. in Arts, B.Sc. in Household Economics, B.Sc. in Pharmacy and B.Com. are divided into two groups — junior courses and senior courses. A course is to be regarded as designating normally three hours lectures or three hours lectures and three hours laboratory work in a subject each week throughout the session. The junior courses are designed for students in the first and second years, the senior courses for students in the third and fourth years. The junior courses are, in general, to be regarded as preparatory to the senior courses.

Certain University courses in the first and second years are offered in co-operation with the Summer School for Teachers which is held annually in the months of July and August at the University of Alberta. Detailed information may be obtained from the Dean.

Students must continue two subjects throughout the third and fourth years.

Students may be exempted from two senior courses selected from Divisions A and B by presenting certificates of having satisfactorily completed an equivalent amount of work in one of the organized affiliated theological colleges.

A common first year is laid down for all students in the Faculty of Arts and Sciences, but thereafter, in accordance with a classification of studies into three general groups, courses are, with certain restrictions, largely elective.

Divisions of Courses of Instruction

- A. Languages and Literatures.
- B. Philosophy, History and Political Economy.
- C. Mathematics, and Natural Sciences.

In accordance with this scheme the Junior, Senior, Honours and Graduate courses leading to the degrees of B.A., B.Sc. in Arts, M.A., M.Sc. and B.Educ. are classified as follows:

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DIVISION A Lang. and Lit.	DIVISION B Philos., Hist. and Pol. Econ.	DIVISION C Math. and Natural Sciences
* Junior Courses—First Year:		
English: 1.	Hist.: 1.	Math. 1, 2, 3.
French: A. 1—3.		Physics: 1.
Greek: 1.		
German: A, 1—3.		
Latin: A, 1—3.		
* Junior Courses—Second Year:		
English: 2.		Bot.: 1.
French: 5—4.	Hist.: 2, 3.	Chem. 1.
German: 2—4.	Phil.: 1, 2.	†Geol.: 33.
Greek: 2—4.		Math.: 7, 22 (55 & 56).
Latin: 2—4.	Pol. Econ.: 1.	Physics: 3a & 3b, 6, 8, 12§§.
		Zoology: 1.
Senior Courses:		
Classics in English 51.	**Ancient Hist.: 51.	Biochemistry: 61.
§Comparative Liter- ature: 51.	Architecture: 62.	Botany: 51, 52.
English: 52, 53, 57, 58, 59, 60, 62.	Education: 53, 54.	Chem.: 51, 52, 54, 58.
French: 51, 52, 54, 55.	Hist.: 53, 54, 56, 57, 58.	Entomology: 61, 62.
German: 51, 52, 53, 54.	Phil.: 51, 52, 53, 54, 55.	Geol.: 51, 52, 53, 55, 58, 62.
Greek: 51.	Psychol.: 51, 52, 54, 55.	Math.: 53, 55, 56, 57, 58, 61, 62, 64.
Latin: 52, 57.	Pol. Ec.: 63, 64, 65, 66, 67.	Physics: 51, 53, 54, 57.
		Physiol.: 61.
		H. Econ.: 51, 52.
Honours and Graduate Courses:		
English: 104, 105, 108, 109.	Hist.: 101, 102.	Bot.: 101, 102, 103.
French: 101, 102.	Philos.: 101, 102, 103, 107, 108.	Chem.: 101, 102, 103, 104.
German: 101, 102.	Pol. Ec.: 101, 102, 120, 130.	Geol.: 101, 102, 103.
Greek: 101.	Psychol.: 101, 102, 103, 104, 105.	Math.: 101, 102, 103, 104, 105.
Latin: 102, 103, 104, 105, 111, 113.		Physics: 101.

*And Phys. Ed.: 1 & 2.

†Open only to candidates for Honours in Botany, and B. Com. students.

§See under Department of Modern Languages.

**See under Department of Classics.

§§See page 192.

B.A.—GENERAL COURSE

DEGREE OF B.A. OR B.Sc. IN ARTS

FIRST YEAR

SUBJECT	Course No.	Lect. Hrs.	Pge
English	English 1	3	147
*French	French 1—3	3	177
*German	German 1—3	3	180
*Greek	Greek 1	3	139
*Latin	Latin 1—3	3	136
History	History 1	3	158
Mathematics	Mathematics 1	3	167
Physics	Physics 1	3†	191
Physical Education.....	Physical Education 1	2	204

†Two hours a week of laboratory work are also required.

*Any two of these are to be taken, but students presenting two sciences for matriculation must take a beginner's course language in the first year. See "A" Courses under departmental announcements.

With a view to enable entrance deficiencies in the languages to be overtaken, the opportunity is offered to students who have obtained at least second class standing in an "A" language course to pursue during the following summer, under the direction of the Department concerned, the respective sequent course in French 1, German 1 or Latin 1, provided that it is the intention to continue the language in question through the second year. Information respecting details may be obtained from the Registrar.

B.A.—GENERAL COURSE

- Second Year:**
1. One course from Division A.
 2. One course from Division B.
 3. One course from Division C.
 4. 5. *Two options.
 6. Physical Education 2.

*Not more than two courses are to be selected from any one department.

Students entering with Grade XII standing must select either Chemistry or Physics of the second year.

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- Third Year:**
1. 2. Two courses from Division A.
 3. One course from Division B.
 4. *One option.

or

1. 2. Two courses from Division B.
3. One course from Division A.
4. *One option.

*Not more than two courses are to be selected from any one department.

- Fourth Year:**
1. 2. Two courses from Division A.
 3. One course from Division B.
 4. *One option.

or

1. 2. Two courses from Division B.
3. One course from Division A.
4. *One option.

*Not more than two courses are to be selected from any one department.

B.Sc. IN ARTS—GENERAL COURSE

The distinction between the B.A. and the B.Sc. in Arts becomes apparent in the second year. The student who in his second year chooses three courses from Division C is regarded as a candidate for the degree of B.Sc. in Arts.

- Second Year:**
1. One course from Division A.
 2. One course from Division B.
 3. 4. 5. *Three courses from Division C.
 6. Physical Education 2.

*Not more than two courses are to be selected from any one department.

- Third Year:**
1. 2. Two courses from Division C.
 3. One course from Division A or Division B.
 4. *One option.

*This optional course to be related to one of the courses from Division C and to be approved by the Committee on Science studies.

HONOURS REQUIREMENTS

- Fourth Year:**
1. Two courses from Division C.
 3. One course from Division A or Division B.
 4. *One option.

*This optional course to be related to one of the courses from Division C and to be approved by the Committee on Science studies.

DEGREES WITH HONOURS IN THE FACULTY OF ARTS AND SCIENCES

1. The courses in honours differ from the general courses in that they are planned with a view to specialization.
2. Students desirous of reading for honours must consult the head of the department concerned as early in their university course as possible; they are responsible for registering in their second year according to the regulations on the following pages.
3. Application to read for honours should be addressed to the Registrar if possible before the end of the Second year.
4. Permission to read for honours is granted by the Faculty Council of Arts and Sciences on the recommendation of the Committee on Honours.
5. Students must begin their courses in honours in the third year, and in order to graduate with honours, must continue this work through the third and fourth years. Students may be graduated with first or second rank honours; this being determined by the average mark of all senior courses in the department in which they are reading for honours. Students who fail to secure 65% shall be transferred to the pass course.
6. Students in the second year, intending to read for honours in the third and fourth years, are required to take courses in two divisions, but in the third and fourth years may confine their work to one division, but not to one department.
7. Students reading for honours, wishing to secure the academic standing requisite for the Specialist's Certificate, issued by the Provincial Department of Education must conform to the requirements laid down by that Department.

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**HONOURS COURSES—DEPARTMENTAL
REQUIREMENTS**

Department of Botany

- Second Year:** Prerequisites to Honours in Botany.
Chem. 1; Botany 1; Geol. 33; one option from A or B; one option from Division C.
- Third Year:** Bot. 51; Geol. 51; Bot. 102; one option from a second division or 6 hrs. practical Botany.
or
Bot. 51; Chem. 54; Bot. 102; one option from a second division or 6 hrs. practical Botany.
- Fourth Year:** Bot. 52; Chem. 52; Bot. 101; one option in a second division or 6 hrs. practical Botany.
or
Bot. 52; Biochemistry 61; Bot. 103; one option from a second division or 6 hrs. practical Botany.

Department of Chemistry

- Second Year:** Prerequisites to Honours in Chemistry.
Chemistry; Mathematics; Physics 6; one option (affiliated subject recommended); one option in second division.
- Third Year:** B.A. or B.Sc.
Chem. 101; Chem. 51; Chem. 58; option.
or
B.Sc. only.
Chem. 103; Chem. 51; Mathematics; Physics.
- Fourth Year:** Chem. 102; Chem. 54; two options.
or
Chem. 104; Chem. 52; Chem. 58; option in a second department.

Department of Classics

- Second Year:** Prerequisites to Honours in Classics.
Latin 2 and 4; Greek 2 and 4; Classics in English 51, or Ancient History 51; English, one course; Philosophy or Political Economy, one course.

HONOURS REQUIREMENTS

Third Year: Either Greek or Latin as a major, two courses; Latin or Greek as a minor, one course; one optional course.

Fourth Year: As for Third Year above.

Note regarding the character of the Senior courses: of the major courses, one, specifically an Honours course; the second, a general course in which Honours students will follow a different line of work from that followed by the general student. The minor course to be a general course treated as the second major above.

Department of English

Second Year: Prerequisites to Group A.
English 2; Classics in English 51; History 2; a foreign language; an option.

or

Prerequisites to Group B.
English 2; Classics in English 51; Latin or French; History 3; an option.

Third Year: Group A.
English 52, 53, 55, 57, 58, 59, 60 (one of these; not all given every year); English 108; two options.

Group B.
English 52, 53, 55, 57, 58, 59, 60 (one of these; not all given every year); English 104; two options.

Fourth Year: Group A.
English 52, 53, 55, 57, 58, 59, 60 (one of these; not all given every year); English 109; two options.

Group B.
English 52, 53, 55, 57, 58, 59, 60 (one of these; not all given every year); English 105; two options.

Department of History

Second Year: Prerequisites to Honours in History.
History 2; History 3; Pol. Econ. 1; English 2; one option.

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Senior Years: History 102; History 57; Pol. Econ. 63; one option.

1924-25 History 101; History 58; any one of the following: History 53, History 54, History 56; one option.

Note: Students not possessing a fair reading knowledge of French or German are advised to take a Modern Language in the first and second years.

Department of Mathematics

First Year: Prerequisites to Honours in Mathematics: Mathematics 3.

Second Year: Mathematics, two junior courses; Physics, one junior course; one option in A or B; one option.

Third Year: Mathematics, one Honours course and two senior courses; Physics or Political Economy, one senior course.

Fourth Year: Mathematics, one Honours course and two senior courses; one senior course (a Natural Science, Political Economy, Education, Philosophy or Psychology).

Note: Students not possessing a fair reading knowledge of French or German are advised to take a Modern Language in the first and second years.

Department of Modern Languages

Second Year: Prerequisites to Honours in Modern Languages. French 4—5; German 2—4; English 2, or (for students intending to specialize in French) Latin 2 and 4; History 2; Psychology 1 or 2.

Third Year: French 51 and 55 (for 1924-25); German 52; English or one course from Division B.

or

German 51 and 52; French 51; English or one course from Division B.

HONOURS REQUIREMENTS

Fourth Year: French 51 and 55 (for 1924-25); English or Philosophy, or History; Conference Course 101 and 102.

or

German 51 and 52; English or Philosophy or History; Conference Course 101 and 102.

Notes: 1. Special prescribed summer readings will be allotted to all Honours students.

2. A thesis, the topic of which must be selected before the close of the third year, will be required of all students reading for Honours. This thesis must be in the hands of the head of the Department by March 31 of the graduating year.

Department of Philosophy

Second Year: Prerequisites to Honours in Philosophy. Psychology 1 or Psychology 2; option in a second division; three free options.

Third Year: Philosophy, two courses; Psychology, one course; option in a second department.

or

Psychology, two courses; Philosophy, one course; option in a second department.

Fourth Year: Philosophy, two courses; Psychology, one course; option in a second department.

or

Psychology, two courses; Philosophy, one course; option in a second department.

Note: Honours students in the Department of Philosophy will meet one hour per week to discuss problems of contemporary philosophy.

Department of Physics

Second Year: Prerequisites to Honours in Physics. Physics 6 or 8, or 12; Math. 55 and 22; Chem. 1; one option from a second division.

UNIVERSITY OF ALBERTA

Third Year: Physics, two senior courses; Math. 57, one free option.

Fourth Year: Physics, two senior courses; one option in Division C; one free option.

Department of Political Economy

Second Year: Prerequisites to Honours in Political Economy. Political Economy 1; Psychology 2; History 2; two options.

Third Year: Political Economy 101 or 102; Political Economy 63; Political Economy 66 or 67; one option.

Fourth Year: Political Economy 101 or 102; Political Economy 64; Political Economy 65; one option. Honour students may count as courses in Political Economy, Mathematics 61 (Theory of Finance) and Mathematics 62 (Statistics). See Dept. of Mathematics.

THE DEGREE OF B.Sc. in HOUSEHOLD ECONOMICS

Junior Courses.

First Year: As for B.A.

Second Year: One course Division A; Chemistry 1; Zoology 1; Political Economy 1; Household Economics 2 and 3; Bacteriology 2, first term; Household Economics 1, second term; Physical Education 2.

Senior Courses.

Third Year: One course from Division A or B; Chemistry 52; Physiology 61 (lectures); Biochemistry 61; Household Economics 55.

Fourth Year: One course from Division A or B; Chemistry 59; Hygiene and Sanitation 51; Household Economics 56, 57, 58, 59.

For an outline of the course leading to the degree of B.H.Ec., see the Faculty of Agriculture, p. 106.

HONOURS REQUIREMENTS

THE DEGREE OF BACHELOR OF COMMERCE (B.Com.)

First Year: As for B.A.

- Second Year:**
1. Political Economy 1.
 2. Geology 33 (First Half); Political Economy 10 (Second Half).
 3. A modern language (already taken for Matriculation and first year).
 4. Accountancy 1.
 5. Chemistry 1.
 6. Phys. Ed. 2.

Third and Fourth Years: The equivalent of four full senior courses to be taken each year.

1. Theory of Finance (Math 61).
2. Currency, Banking and Finance; Pol. Ec. 66.
3. Trade and Transportation (Pol. Ec. 64). (Not offered 1924-25).
4. (a) Business Administration (Acc'y 55), and (b) Marketing (Pol. Ec. 73). (Not offered 1924-25.)
5. Commercial Law.
6. A Modern Language (already taken in second year).
7. and 8. Any two of:
 - (a) A foreign language.
 - (b) Accountancy 52.
 - (c) Insurance. (Not offered 1924-25).
 - (d) Statistics, Math. 62. (Not offered 1924-25.)
 - (e) Another course in Political Economy.
 - (f) Accountancy 53. (Not offered 1924-25.)
 - (g) Psychology 54.
 - (h) A science.

Note: By adding Psychology 2 in the second year and by taking an additional senior option, it is possible for a student who has secured the required grades in his courses, to take the degree of Bachelor of Commerce with honours in Political Economy.

UNIVERSITY OF ALBERTA

II—THE B.Sc. DEGREE IN PHARMACY

JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	Lect. Hrs.	Pge
English Composition	English 1	3	147
*French	French 1—3	3	177
History	History 1	3	158
Latin	Latin 1—3	3	136
Mathematics	Mathematics 1	3	167
Physics	Physics 1	3†	191
Physical Education	Physical Education 1	2	204

*German may be substituted for French at the option of the student.

†Two hours a week of laboratory work are also required.

JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	Lect. Hrs.	Lab. Hrs.	Pge
Botany	Bot. 1	3	3	126
Chemistry	Chem. 1	3	3	127
English	Eng. 2	3	...	148
*Mathematics	Math. 7	3	...	168
*History	Hist. 2	3	...	159
*Political Economy	Pol. Ec. 1	3	...	196
*Zoology	Zool. 1	3	3	202
†Latin	Lat. 36	1	...	137
Physical Education	Phys. Ed. 2	2	...	204

*History 2 is optional with Political Economy 1, and Mathematics 7 optional with Zoology 1.

†Second half session.

SENIOR COURSES—THIRD YEAR

SUBJECT	Course No.	Lect. Hrs.	Lab. Hrs.	Pge
†Botany	Bot. 51	3	3	126
Chemistry	Chem. 52	3	3	129
†Chemistry	Chem. 58	3	3	130
Materia Medica	M. M. 51	4	...	167
Pharmacy	Pharm. 51, 52 and 54	4	6	184
*Toxicology	Toxic. 61	1	...	202

*Second half session.

†Botany 51 and Chemistry 58 are to be taken in alternate years by third and fourth year students together. In 1924-25 Chemistry 58 will be given.

COMBINED COURSES

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	Lect. Hrs.	Lab. Hrs.	Pge
*Bacteriology	Bact. 61	1	3	124
Biochemistry	Bioch. 61	3	3	125
Chemistry	Chem. 51	3	3	128
Materia Medica	M. M. 52	3	...	167
Pharmacy	Pharm. 55 .....	...	6	184

*First half session.

†Botany 51 and Chemistry 58 are to be taken in alternate years by third and fourth year students together. In 1924-25 Chemistry 58 will be given.

COMBINED COURSES

Courses of study have been arranged associating the courses for the B.A. degree with those leading to degrees in the other Faculties. Details of these Combined Courses will be found in the statements of the associated Faculties; for B.A., B.Sc. on p. 87-88, for B.A., M.D. on p. 92-93, for B.A., LL.B. on p. 97, and for B.A., B.S.A. on p. 105.

FACULTY OF APPLIED SCIENCE

The University offers two groups of courses in Applied Science leading to the B.Sc. degree; one in Engineering (Civil, Electrical or Mining); the other in Architecture. Graduate work also is offered leading to the degree of M.Sc. (Calendar page 108). In addition certain combinations of studies will be given for those students who are looking forward to the profession of Chemical Engineering or of Engineering Physics, and who have shown particular ability and aptitude in studies of this kind. For information about these courses students should consult the Dean.

The attention of students is called to the Combined Course leading to the degrees of B.A., B.Sc., details of which are given on pages 87-88.

UNIVERSITY OF ALBERTA

THE B.Sc. DEGREE IN ENGINEERING

The requirements of the first, second and third years of the three divisions of Engineering groups are uniform, and are designed to give the general foundation in mathematics and drawing and in physical and chemical science necessary to specialization in the various branches of Engineering in the last two years. In the first and second years a course in French or German is also offered, specially adapted to an Applied Science curriculum, and in the third year a short course in the History of Science.

Students of this University who may wish to study branches of Engineering, in which the equipment for fourth and fifth year work has not been completed, may finish their course at certain universities of Eastern Canada, where, according to arrangement, they will be admitted **ad eundem statum**.

*JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	Lect. Hrs.	Page
English	Eng. 1	3	147
French or	French 1—3 or	3	177
German	German 1—3	3	180
History	History 1	3	158
Mathematics	Math. 2	6	167
Physics	Physics 1	3†	191
Physical Education	Physical Education 1	2	204

†Two hours a week of laboratory work are also required.

*Students entering the Faculty of Applied Science with standing in first year Arts or Senior Matriculation as outlined on Page 36 of the Calendar will be granted clear entrance to the second year of the five-year course.

B.Sc. IN ENGINEERING
JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Science & Engineering.....	C. E. 10	1	...	...	...	133
Mechanical Drawing	Draw. 2 .....	...	3	...	3	143
Descriptive Geometry	Draw. 4	1	3	1	3	144
English	English 2	3	...	3	...	148
*French or German	French or .....	...	...	...	...	177
	German 43	3	...	3	...	180
Elem. Math. Anal.	Math. 21	6	...	6	...	168
Elementary Mechanics	Math. 22	3	2	3	2	168
Physics	Phys. 3	3	2	3	2	191
†Survey School	C. E. 6 .....	...	...	...	...	132
Physical Education	Phys. Ed. 2 .....	...	2	...	2	204

*The language taken in matriculation, and in the first year.

JUNIOR COURSES—THIRD YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
†Survey School	C. E. 7 .....	...	...	...	...	132
Chemistry	Chem. 1	3	3	3	3	127
Applied Mechanics	C. E. 1 .....	...	...	3	...	131
Mapping	C. E. 2 .....	...	3	...	...	132
Materials of Const.	C. E. 3	2	...	2	...	132
History of Science	H. of Sci.	1	...	1	...	144
Mechanical Drawing	Draw. 5 .....	...	3	...	3	144
Geology	Geol. 32	2	...	...	3	156
Calculus & Mechanics	Math. 25 & 26	6	...	6	...	168
Physics	Phys. 6	3	2	3	2	192

†Credits for this course are included with the work of the following year.

UNIVERSITY OF ALBERTA

A—CIVIL ENGINEERING*

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Hydraulics	C. E. 55 .....	...	...	3	3	133
App. Thermodynamics	C. E. 57	2	...	2	3	134
Structural Design	C. E. 62	1	...	1	3	134
Applied Mechanics	C. E. 67	3	3	2	...	135
Applied Electricity	E. E. 53	2	3	2	...	145
Geology	Geol. 52	3	3	...	...	156
Astronomy	Math. 53	3	...	3	...	169
Economics	Pol. Ec. 62	2	...	...	...	196
Problems in Labor Man- agement	Pol. Ec. 68 .....	...	...	2	...	197

*Students in Civil Engineering are strongly advised to work in a drafting office during one summer, in order to gain necessary practical experience.

SENIOR COURSES—FIFTH YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Foundations	C. E. 52	1	...	1	...	133
Theory of Structures	C. E. 53	3	...	3	...	133
Water Supply & Sew. Disp.	C. E. 59	2	3	2	3	134
Structural Design	C. E. 63	2	3	2	3	135
Testing Lab.	C. E. 66 .....	...	3	...	3	135
Land Transportation	C. E. 74	3	...	3	...	136
San. Science	Hyg. 51	1	...	...	...	124
Problems in Labor Management	Pol. Ec. 68 .....	...	...	2	...	197
*Optional Subject						

*Problems in Labor Management, or Municipal Accountancy $\frac{1}{2}$ term, 3 hrs. per week for students looking forward to following a career in city management.

B.Sc. IN ENGINEERING

B—ELECTRICAL ENGINEERING

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Half		Sec. Half		Page
		Lect.	Lab.	Lect.	Lab.	
App. Thermodynamics	C. E. 57	2	...	2	3	134
Applied Mechanics	C. E. 67	3	3	2	...	135
Applied Electricity	E. E. 51	3	3	3	3	144
Machine Design	E. E. 54 .....	...	...	2	...	145
Mechanics of Machines.....	E. E. 55 .....	...	...	1	1	145
Advanced Calculus	Math. 59	3	...	...	...	170
Electrical Physics	Phys. 53	2	3	2	3	193
Economics	Pol. Ec. 62	2	...	...	...	196
Problems in Labor Management	Pol. Ec. 68 .....	...	...	2	...	197

SENIOR COURSES—FIFTH YEAR

SUBJECT	Course No.	Lect. | Lab.		Lect. | Lab.		Page
		First Half	Sec. Half	First Half	Sec. Half	
Hydraulics	C. E. 55 .....	...	...	3	3	133
Electro-Chemistry	Chem. 60.	2	...	...	...	130
Alternating Currents	E. E. 76	3	6	3	6	146
Electrical Design	E. E. 77	1	2	1	2	146
El. Power Transmission and Distribution	E. E. 78	2	...	2	...	146
Electric Railways	E. E. 79	2	...	...	...	146
Telegraphy & Telephony	E. E. 80 .....	...	...	2	...	147
Industrial Applications of Electrical Power	E. E. 81 .....	...	...	2	...	147
Sanitary Science	Hyg. 51	1	...	...	...	124
Electron Theory	Phys. 55	3	3	193
Problems in Labor Management	Pol. Ec. 68	2	...	197

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C—MINING ENGINEERING

FOURTH YEAR COURSES

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Inorganic Chemistry	Chem. 51	3	3	3	3	128
Economics	Pol. Ec. 62	2	...	...	...	196
Political Economy	Pol. Ec. 68 .....	...	...	2	...	197
Applied Electricity	E. E. 53	2	3	2	...	145
Hydraulics	C. E. 55 .....	...	...	3	3	133
App. Thermodynamics	C. E. 57	2	...	2	3	134
Applied Mechanics	C. E. 70	3	...	...	...	135
Petrology	Geol. 52	3	3	3	3	156
Mineralogy	Geol. 54	3	3	...	3	157
Fire Assay	M. E. 54	1	3	...	...	173

(a) Coal Mining Option

FIFTH YEAR COURSES

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Sanitary Science	Hyg. 51	1	...	...	...	145
Political Economy	Pol. Ec. 68 .....	...	...	2	...	197
Historical Geology	Geol. 56 .....	...	...	3	3	157
Mineral Deposits	Geol. 58	3	...	3	3	158
Prepared Fuels	M. E. 55	2	...	...	...	173
Principles of Mining	M. E. 56	3	...	...	...	174
Coal Mining	M. E. 59 .....	...	...	3	...	174
Mining Machinery	M. E. 61	3	3	...	...	174
Ventilation	M. E. 62 .....	...	...	1	...	175
Concentrating Mach.	M. E. 63	2	3	...	...	175
Mine Design	M. E. 64 .....	...	...	...	3	175
Fuel Analysis	M. E. 65	6	...	6	175
Compressed Air Mach.	M. E. 66	2	175
Mine Survey School	M. E. 67	176

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(b) Metal Mining Option

FIFTH YEAR COURSES

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Quantitative Analysis	Chem. 56 .....	...	6	...	6	129
Sanitary Science	Hyg. 51	1	...	...	...	124
Political Economy	Pol. Ec. 68 .....	...	...	2	...	197
Petrography	Geol. 57 .....	...	3	...	...	158
Mineral Deposits	Geol. 58	3	...	3	3	158
Prepared Fuels	M. E. 55	2	...	...	...	173
Principles of Mining	M. E. 56	3	...	...	...	174
Metallurgy	M. E. 58 .....	...	...	3	3	174
Metal Mining	M. E. 60 .....	...	...	3	...	174
Mining Machinery	M. E. 61	3	3	...	...	174
Ventilation	M. E. 62 .....	...	...	1	...	175
Concentrating Mach.	M. E. 63	2	3	...	...	175
Mine Design	M. E. 64 .....	...	...	...	3	175
Mine Survey School	M. E. 67 .....	...	...	...	...	176

(c) Mining Geology Option

FIFTH YEAR COURSES

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Quantitative Analysis	Chem. 56 .....	...	6	...	6	129
Sanitary Science	Hyg. 51	1	...	...	...	124
Political Economy	Pol. Ec. 68 .....	...	...	2	...	197
Stratigraphy	Geol. 55	3	3	3	3	157
Petrography	Geol. 57 .....	...	3	...	...	158
Mineral Deposits	Geol. 58	3	...	3	3	158
Prepared Fuels	M. E. 55	2	...	...	...	173
Principles of Mining	M. E. 56	3	...	...	...	174
Metallurgy	M. E. 58 .....	...	...	3	3	174
Metal Mining	M. E. 60 .....	...	...	3	...	174
Concentrating Machinery	M. E. 63	2	3	...	...	175

THE B.Sc. DEGREE IN ARCHITECTURE

The course of study in Architecture of the first year includes a number of subjects in common with certain courses pertaining specially to the Faculty of Arts and Sciences, and with certain courses pertaining specially to the Faculty of Applied Science, together with the Architectural and Freehand Drawing adapted to the Architectural curriculum. In succeeding years scientific and technical subjects are studied to the extent required in the practice of Architecture. Throughout the course increasing attention is given to Architectural design.

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For the session 1924-25 the second, third and fourth years of the Architectural Course will not be given, but students entering upon their architectural studies may take the first year as below:

JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Arch. Drawing	Draw. 1 .....	...	3	...	3	143
Freehand Drawing	Draw. 3 .....	...	6	...	6	143
Descriptive Geometry	Draw. 4	1	3	1	3	144
English	English 1	3	...	3	...	147
French	French 43	3	...	3	...	177
History	History 1	3	...	3	...	158
Gen. Elem. Math.	Math. 2	6	...	6	...	167
Physics	Phys. 1	3	2	3	2	191
Physical Education	Phys. Ed. 1 .....	...	2	...	2	204

JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Survey School	C. E. 6 .....	...	...	...	...	132
Arch. Drawing	Arch. 2 .....	...	3	...	3	121
Arch. Design	Arch. 3 .....	...	6	...	9	121
History of Arch.	Arch. 4	2	...	2	...	121
Building Const.	Arch. 5 .....	...	6	...	6	121
Decorative Arts	Arch. 6 .....	...	4	...	4	121
Mapping	C. E. 2 .....	...	3	...	...	132
History of Ancient World	*Ancient Hist. 51	3	...	3	...	140
Elem. Math. Anal.	Math. 21	6	...	6	...	168
Physical Education	Phys. Ed. 2 .....	...	2	...	2	204

JUNIOR COURSES—THIRD YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Arch. Drawing	Arch. 51 .....	...	3	...	3	122
Arch. Design	Arch. 52	1	9	1	9	122
History of Arch.	Arch. 54 or 55 ..	2	...	2	...	122
Decorative Arts	Arch. 56 .....	...	3	...	3	122
Specifications	Arch. 58	1	...	...	...	123
Building Construction ..	Arch. 61 .....	...	6	...	6	123
Mat. of Construction	C. E. 3	2	...	2	...	132
Applied Mechanics	C. E. 71	2	3	2	...	136
Sanitary Science	Hyg. 51	1	...	...	...	124

*See under Department of Classics.

COMBINED COURSES

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Architectural Design	Arch. 52	1	9	1	9	122
History of Arch.	Arch. 55	2	...	2	...	122
Decorative Arts	Arch. 57	1	3	1	3	122
Ventilation & Heating.....	Arch. 60	1	...	...	...	123
Foundations	C. E. 52	1	...	1	...	133
Structural Design	C. E. 62	1	...	1	3	134
Testing Lab.	C. E. 66 .....	...	3	...	3	135

COMBINED COURSES

I—COMBINED COURSE LEADING TO THE DEGREES OF B.A. AND B.Sc. IN ENGINEERING

First Year: English 1, Modern Language, 2nd Language History 1, Mathematics 1 or 3, Physics 1 or 3, Phys. Ed. 1.

Second Year: One Junior Course from A or B, Modern Language from A (the same as in 1st yr.), Chemistry 1, Mathematics 21, Mathematics 22—Mechanics, Zoology or Botany, Phys. Ed. 2.

Third Year: Two Senior Courses from A and B, Math 55—Calculus, Physics 3 or 6 or 8 or 12, Geology 51, Drawing 2 and 4, Science and Engineering (1st half) *C. E. 6—Survey School.

Fourth Year: *C. E. 7—Survey School, Two Senior Courses from A and B, One Senior Course from C (Physics 6, if not already taken), Math. 56, —Mechanics, C. E. 1—Applied Mechanics (2nd half), C. E. 3—Materials of Construction, Draw. 5—Mechanical Drawing, C. E. 2—Mapping (1st half).

Note: Where any of the courses previously taken are equivalent to the courses required in the third and fourth years of Applied Science, substitute courses must be arranged in conjunction with the Department concerned.

The B.A. degree may be granted at the end of the fourth year.

*Credits for this course are included with those of the following year.

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Fifth Year: As in Applied Science, fourth year of Department chosen.

Sixth Year: As in Applied Science, fifth year of Department chosen.

II—COMBINED COURSE LEADING TO THE DEGREES OF B.A. AND B.Sc. IN ARCHITECTURE

(See note on page 86)

First Year: English 1, History 1, Mathematics 1 or 3, Physics 1 or 3, French, Latin, Phys. Ed. 1.

Second Year: English 2, French, Chemistry, Political Economy 1, Mathematics 21, Mathematics 22—Mechanics, Phys. Ed. 2.

Third Year: English 52 or 53 or 59, French 52, History of the Ancient World 51, Physics 3 or 6 or 8 or 12, Architecture 62, Drawing 3, Drawing 4, C.E. 6—Survey School.

Fourth Year: Two Senior Courses from A and B, one Senior Course from C., C.E.. 2—Mapping, Arch. 4—History of Architecture, Arch. 5—Building Construction, Drawing 1, Arch. 6—Decorative Arts.

The B.A. degree may be granted at the end of the fourth year.

Fifth Year: As in Third Year Architecture.

Sixth Year: As in Fourth Year Architecture.

FACULTY OF MEDICINE

Three courses are offered, one leading to the degree of Doctor of Medicine, another to the degree of Doctor of Dental Surgery, and the third to the degree of Bachelor of Science in Nursing.

THE DEGREE OF DOCTOR OF MEDICINE

The course leading to this degree is arranged on the basis of a six-year curriculum.

The attention of students is called to the Combined Courses leading to the degrees of B.A., M.D.; B.Sc., M.D.; B.A., D.D.S. and B.Sc., D.D.S., details of which are given on pages 92-93.

MEDICINE

FIRST YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Botany	Bot. 2	3	2	3	2	126
Zoology	Zoology 2	3	3	3	3	203
Chemistry	Chem. 2	3	6	3	6	128
Physics	Phys. 11	3	2	3	2	191
French or	French 45 or	2	...	2	...	178
German	German 45	2	...	2	...	180
Mathematics	Math. 32	3	...	...	...	169
Physical Education	Phys. Ed. 1 .....	...	2	...	2	204

SECOND YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Gross Anatomy	Anat. 4	2	12	...	...	115
Gross Anatomy	Anat. 2 & 5 .....	...	...	2	10	115
Histology	Anat. 10	3	4	...	...	115
Splanchnology	Anat. 12 } .....	...	...	3	7	115
Embryology (Human) ...	Anat. 14 } .....	...	...	...	...	115
Embryology	Zoology 3	2	3	...	...	203
Organic Chemistry	Chem. 3	3	...	3	3	128
Bacteriology	Bact. 1	1	3	...	...	123
Materia Medica	Mat. Med 3	1	...	1	...	166

THIRD YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Gross Anatomy	Anat. 53 & 54	2	10	2	6	116
Neurology	Anat. 60 .....	...	...	2	4	116
Bacteriology	Bact. 51	1	2	1	2	124
Biochemistry	Biochem. 1	3	3	3	3	125
*Pharmacy	Pharm. 3	1	...	...	...	184
Physiology	Physiol. 1	3	3	3	3	194
Bio-Physics	Phys. 59 .....	...	2	...	2	193

*Six laboratory periods of two hours each in Pharmacy 3 to be arranged on Thursday afternoon, sec. half.

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FOURTH YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Medicine	Clin. Med. 51	1	9	1	9	171
Surgery	Clin. Surg. 51.....	1	7	1	7	200
Physiology	Physiol. 51	3	3	3	3	194
Biochemistry	Biochem. 51 .....	...	3	...	3	125
Pharmacology	Pharm'col. 51	2	3	2	3	195
Pathology	Path. 51	4	2	2	4	183
Clinical Microscopy	Path. 52 .....	...	2	...	...	183
Psychology	Psychol. 60 .....	...	...	2	...	188

FIFTH YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Medicine	Med. & Clin. Med. 52	2	10½	2	10½	171
Surgery	Surg. & Clin. Surg. 52	1	6	1	6	201
Obstetrics &	Obstetrics & Gynaecol. 51.....	1	3	1	3	182
Gynaecology	Path. 53	2	4	2	4	183
Pathology	Opthal. 51 .....	...	1	...	1	201
Ophthalmology	R.-O.-L. 51 .....	...	1	...	1	201
Rhino-Oto-Laryngology ..	Hygiene 53	1	...	1	2*	125
Hygiene	Thera. 51	1	...	1	2†	172
Therapeutics	Med. Jur. 51	1	...	...	...	183
Med. Jurisprudence	Toxicol. 51 .....	...	...	1	...	183
Toxicology	Biochem. 52	1	...	1	...	125
Path. Chem.	Psychol. 61	1	...	1	...	188
Psychopathology						

*8 2 hr. periods.

†6 2 hr. periods.

SIXTH YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
*Medicine	Clin. Med. 53	2	11	2	11	172
†Surgery	Clin. Surg. 53	1	6	1	6	201
Obs. & Gynaecology	Obs. & Gynae. 52	1	5	1	5	182
Clinical Pathology	Path. 54 .....	...	1	...	...	183
Ophthalmology	Ophth. 52 .....	...	1	...	...	201
Rhino-Oto-Laryngology ..	R.-O.-L. 52 .....	...	...	...	1	201
Psychiatry	Psychology 62	1	...	1	...	189
Therapeutics	Thera. 52 .....	...	2	...	2	172
Radiology	Radio. 51	1	...	...	...	202
History of Medicine	Hist. of Med. ....	...	...	1	...	172
Clinical Physiology	Physiology 53 .....	...	1	...	...	194

*Including: Pediatrics, Tuberculosis, Contagious Diseases, Neurology.

†Including: Urology, Orthopedics, Dermatology.

Students will act as assistants to the Interns at the University Hospital.

DENTISTRY

THE DEGREE OF DOCTOR OF DENTAL SURGERY

The course leading to the degree is arranged on the basis of a five-year curriculum of which the work of the first three years is offered. Arrangements have been made whereby undergraduates may finish their course at the Royal College of Dental Surgeons of Ontario or at McGill University.

FIRST YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pg.
		Lect.	Lab.	Lect.	Lab.	
Botany	Bot. 2	3	2	3	2	126
Zoology	Zoology 2	3	3	3	3	203
Chemistry	Chem. 2	3	6	3	6	128
Physics	Phys. 11	3	2	3	2	191
French or	French 45	2	...	2	...	178
German	German 45	2	...	2	...	180
Mathematics	Math. 32	3	...	...	...	169
English	Eng. 1	3	...	3	...	147
Physical Education	Phys. Ed. 1 .....	...	2	...	2	204

SECOND YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pg.
		Lect.	Lab.	Lect.	Lab.	
Anatomy	Anat. 20	2	2	...	...	117
Anatomy	Anat. 6 and 8	1	5	2	2	116
Anatomy	Anat. 22 .....	...	...	1	6	117
Histology	Anat. 11	3	4	...	...	117
Chemistry	Chem. 3	3	...	3	3	128
Physiology	Physiol. 1	3	3	3	3	194
Prosthetic Dentistry	Dent. 1	1	5	1	5	142
Physical Education	Phys. Ed. 2 .....	...	2	...	2	204

THIRD YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pg.
		Lect.	Lab.	Lect.	Lab.	
Anatomy	Anat. 23	1	2	1	5	117
Dent. Splanch.	Anat. 13	1	3	...	...	117
Mat. Med. & Pharm.	Mat. Med. 4	1	3	1	3	166
Prosthe. Dent.	Dent. 3	2	4	2	4	143
Op. Dent.	Dent. 2	1	2	1	5	142
Metallurgy	Chem. 61	1	2	...	2	130
Biochemistry	Biochem. 1	3	3	3	3	125
Physiology	Physio. 55	3	195
Applied Dent. Physics ..	A.D. Phys. 1	1

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I—THE COMBINED COURSE LEADING TO THE
DEGREES OF B.A. AND M.D.; AND B.A.
AND D.D.S.

- First Year:**
1. English 1.
 2. History 1.
 3. Mathematics 1.
 4. Physics 11.
 - 5 and 6. French, *German, Latin, Greek:
two to be taken of which one must be a
modern language.
 7. Physical Education.

- Second Year:**
1. An option in Group A.
 2. An option in Group B. (Psych. 1 or 2
recommended).
 3. Zoology 1.
 4. Chemistry 1.
 5. Botany 1.
 6. Physical Education 2.

- Third Year:**
1. Chemistry 51 or 58.
 - 2, 3 and 4. Two senior courses from Group A
and one from Group B, or two senior
courses from Group B and one from
Group A.

- Fourth Year:** The subjects of Second Year Medicine or Dentistry.

The B. A. degree may be granted at the end
of the fourth year.

The subjects of years V, VI, VII and VIII in
the course combined with Medicine
identical with those of the years III, IV,
V and VI, in Medicine; or of years V, VI
and VII identical with those of years III,
IV and V in Dentistry.

*Students in the combined course in Arts and Medicine, and Arts and
Dentistry, who have not matriculated in German, are required
to include German A in their work of the first year.

†Dental students are recommended to take Chemistry 51 and Medical
students, Chemistry 58.

NURSING

II—THE COMBINED COURSE LEADING TO THE DEGREES OF B.Sc. AND M.D.; AND B.Sc. AND D.D.S.

Same as I., except in the third year, which shall be as follows:

- *1. Chemistry 51 or 58.
2. An option from Division C, Botany recommended.
3. A senior course from A or B.
- †4. An option.

*Dental students are recommended to take Chemistry 51 and Medical students, Chemistry 58.

†This optional course to be related to one of the courses from Division C and to be approved by the Committee on Science Studies.

THE SCHOOL OF NURSING

The University of Alberta School of Nursing offers two courses for the training of the professional nurse:

I—DIPLOMA COURSE

A three-year course leading to the Diploma and the R.N. Preliminary educational requirements for this course are Grade X of the Province of Alberta or its equivalent. The Diploma course has a probationary period of five months in the Hospital preceding final acceptance of the student as an undergraduate nurse.

II.—B.Sc. IN NURSING

A five years course leading to the degree of B.Sc. in Nursing, includes three years University work, under the Faculty of Medicine, and hospital training, under the School of Nursing.

First Year: English 1—3 hrs. lect.
Chemistry 1—3 hrs. lect., 3 hrs. lab.
Physics 1—2 hrs. lect., 3 hrs. lab.
Zoology 1—2 hrs. lect., 3 hrs. lab.
Two of: Mathematics, Languages, History, 3 hrs. lect each.
Physical Education 1.
Four months probation in hospital at close of first university session.

Second Year: A Junior Course from Division A or B—3 hrs. lect.
Anatomy—3 hrs. lect., 3 hrs. lab.
Physiology—3 hrs. lect., 3 hrs. lab.
Bacteriology—1 hr. lect., 3 hrs. lab. (half).
Materia Medica and Pharmacology—1 hr. lect., 3 hrs. lab.

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Dietetics 51—3 hrs. lab., 3 hrs. lab.
Physical Education 2.

Third and Fourth Years: Following close of second University year, 28 months to be spent in hospital in training.

Fifth Year: Training in administration, public health, etc., at University.

Any surplus of training left over, to be completed at close of fifth year when University degree and R.N. could both be received.

FACULTY OF LAW THE DEGREE OF LL.B.

The following courses are required of all students taking the degree of Bachelor of Laws. In addition to the study of prescribed texts particular attention will be paid to the provisions of the Statute Law relating to each subject. The Statutes to be covered will be designated by the instructor in charge of each course. Cases other than those found in the prescribed texts may be assigned by the instructor in charge of any course.

Students who have in view their ultimate call to the Alberta Bar are referred to section 35 of the Legal Profession Act (Revised Statutes of Alberta, 1922, chapter 206).

FIRST YEAR

1. **Contracts.** 3 hrs.
Kenny's Edition of Finch's Cases on Contracts; Miles & Brierly, Cases Illustrating Law of Contracts; Selected Cases and Statutes.
2. **Torts 1.** 3 hrs.
Radcliffe & Miles, Cases Illustrating the Principles of the Law of Torts; Selected Cases and Statutes.
3. **Property 1.** Real 2 hrs., Personal 1 hr.
Warren, Cases on Property; Williams, Real Property; Selected Cases and Statutes.
4. **Criminal Law.** 2 hrs.
*Criminal Code of Canada (omitting sections relating to procedure).
Beale, Cases on Criminal Law (3rd ed.); Kenney, Cases on Criminal Law; Selected Cases.*

LAW

- | | |
|---|--------|
| 5. Legal History 1. | 1 hr. |
| General Introductory Course. | |
| Maitland, <i>Constitutional History of England</i> ; Holdsworth, <i>History of English Law</i> , Vol I. | |
| 6. History 3. | 3 hrs. |
| 7. Physical Education 1. | 2 hrs. |

Summer reading will be assigned in April of each year as a supplement to the foregoing courses. Students entering upon their second year will be required to pass an examination upon such assigned reading at the commencement of their second year.

All students are required to take part in such moot cases as may be assigned to them by the Faculty during the year.

SECOND YEAR

- | | |
|---|----------|
| *1. Evidence 1. | 2 hrs. |
| Thayer's <i>Cases and Assigned Statutes and Cases</i> . | |
| *2. Canadian Constitutional Law. | 3 hrs. |
| Selected Cases and Statutes. | |
| 3. Partnership and Agency. | 1 hour. |
| Wambaugh's <i>Cases on Agency</i> ; <i>The Factors Act</i> ; Ames' <i>Cases on Partnership</i> ; <i>The Partnership Act</i> ; Selected Cases and Statutes. (Not offered 1924-25.) | |
| *4. Sales. | 1 hour. |
| Williston's <i>Cases on Sales</i> ; <i>Sales of Goods Act</i> ; Selected Cases and Statutes. | |
| *5. Constitutional History 57. | 3 hrs. |
| Not offered 1924-25. | |
| 6. Criminal Procedure. | 1 hour. |
| Provisions of the Criminal Code relating to Procedure; Selected Cases and Selected Rules of Court. (Not offered 1924-25.) | |
| 7. Practice 1. | 1 hour. |
| 8. Real Property 2. | 1 hour. |
| The Land Titles Act; Selected Cases. | |
| 9. Equity 1. | 2 hours. |
| Scott's <i>Cases on Trusts</i> . | |
| The Trustees' Act; Selected Cases and Statutes. | |

Summer reading will be assigned in April of each year as a supplement to the foregoing courses. Students entering upon their third year will be required to pass an examination upon such assigned reading at the commencement of their third year.

All second year students are required to argue such moot cases as may be assigned to them by the Faculty during the year.

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THIRD YEAR

- *1. **Company and Municipal Law.** 2 hours.
Assigned Statutes and Cases. (Not offered 1924-25.)
- *2. **Bills and Notes.** 1 hour.
Ames' Cases on Bills and Notes; Russell on Bills (2nd ed.); Bills of Exchange Act.
- *3. **Jurisprudence and Comparative Law.** 3 hours.
This course is divided into two parts. The first part will be devoted to an analysis of fundamental legal concepts. The second part is an introduction to the study of Comparative Law. The principles and historical development of the Civil Law and of some modern codes derived therefrom will be briefly studied.
Holland, Jurisprudence; Pound, Readings on Roman Law (2nd Ed.); *Girard, Manuel Élémentaire de Droit Romain.*
- 4. **Legal History 2.** 2 hours.
Holdsworth, History of English Law, Vol. III; Selected Readings.
- *5. **Private International Law.** 1 hr.
- 6. **Practice 2.** 1 hr.
- 7. **Real Property 3.** 1 hr.
- 8. **Equity 2.** 1 hr.
- 9. **Evidence 2.** 1 hr.
Thayer's Cases on Evidence; Selected Cases and Evidence.
- 10. **Professional Etiquette.** 1 hr.
Office Management, etc.
- 11. **Select Topics in the Law of Torts.** 1 hr.
- 12. **Informal Discussion of Recent Cases and Legislation.** 1 hr.
- 13. **Bankruptcy.** 1 hr. 1st half.
- 14. **Wills and Administration.** 1 hr. sec. half.
Assigned Cases and Statutes.

*For economy in lecture work the Faculty may alternate courses of the second year, marked * with courses of third year marked *, the two years taking the lectures together in the courses so alternated.

LAW

DEGREE WITH DISTINCTION

Students who have given evidence of a high standard of scholarship during their first year of law work may be permitted, with the approval of the Faculty, to take any two of the following subjects in addition to the work ordinarily required in the second and third years in law:

- (a) Legal Psychology;
- (b) Corporation Finance (P.E. 69);
- (c) Political Science (P.E. 63);
- (d) Public International Law;
- (e) Roman Law.

Students who have been permitted by the Faculty of Law to take courses leading to the Degree of Bachelor of Laws with Distinction may, on special application to the Faculty of Law, be permitted to substitute one or more courses in lieu of one or more of the additional Distinction subjects enumerated above.

If the work of such students in the two extra subjects so taken and in the work of the second and third years in Law indicates a high standard of scholarship, such students may, with the approval of the Faculty, be granted the degree of Bachelor of Laws with distinction.

COMBINED COURSES LEADING TO THE DEGREE OF B.A. AND LL.B.

- First Year:**
- 1. English 1.
 - 2. History 1.
 - 3. Mathematics 1.
 - 4. Physics 1.
 - *5. Legal Latin.
 - 6. Any one of the following:
 - French 1—3.
 - German 1—3.
 - Greek 1.
 - 7. Physical Education 1.

*Students entering the second year of the Combined Course in Arts and Law from Grade XII who have not Grade XII standing in Latin must take the Latin prescribed for students of the first year.

UNIVERSITY OF ALBERTA

- Second Year:** 1. English 2.
2. History 3.
3. Political Economy 1.
4. One course from Division C.
5. One option.
6. Physical Education 2.
- Third Year:** 1. History 57 or 58.
2. Political Economy.
3. and 4. Two Senior Courses from Divisions A and B.
5. One option.
- Fourth Year:** 1. History 57 or 58 together with
2. Subjects of First Year Law.
The degree of B.A. may be granted at the end of the fourth year.
- Fifth Year:** Subjects of Second Year Law.
- Sixth Year:** Subjects of Third Year Law.
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FACULTY OF AGRICULTURE

In the Faculty of Agriculture courses are offered leading to the degree of B.Sc. of B.S.A. and of B.H.Ec.

THE DEGREE OF B.S.A.

For the B.S.A. degree a three-year course has been offered for students who have completed the two-year course in one of the Provincial Schools of Agriculture, or who have equivalent credits from other agricultural institutions. This degree will be offered only to students who are qualified to enter the second year in the Fall of 1924, or the third year in the Fall of 1925, and thereafter no registrations for this degree will be received.

Students must have had at least ten months of practical work in agriculture before the degree can be granted.

AGRICULTURE

SECOND YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Agric. Engineering	A. E. 2	1	2	1	2	113
Animal Husbandry	A. H. 10 .....	...	...	2	2	118
Bacteriology	Bact. 2	1	3	...	...	124
Political Economy	Pol. Ec. 2	2	...	...	...	196
Chemistry	Chem. 5	1	3	...	...	128
English	Eng. 3	1	...	1	...	148
Field Husbandry	F. H. 50	2	2	2	2	153
History of Agriculture	His. of Ag. 2	1	...	1	...	161
Horticulture	Hort. 51	2	2	2	2	162
Soils	Soils 1 & 2	2	4	2	4	199
Veterinary Science	Vet. Sci. 1	1	...	1	...	202
Physical Education	Phys. Ed. 2 .....	...	2	...	2	204
Elective						
Animal Husbandry	A. H. 3 & 4	2	2	...	...	118
Botany	Bot. 4 .....	...	...	1	2	126
Zoology	Zool. 1	3	3	3	3	202
Entomology	Ent. 1	2	...	2	...	151
*Chemistry	Chem. 4	3	...	3	...	128

*To be given with Chem. 52 only.

THIRD YEAR

Required

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Agric. Engineering	A. E. 51	1	2	1	2	114 ✓
Dairying	Dai. 51	3 lec.-lab.		3 lec.-lab.		141
Political Economy	Pol. Ec. 70 .....	...	...	2	...	197
English	Eng. 54	1	...	1	...	149
History of Agriculture	Hist. of Ag. 51	1	...	1	...	161

Science Electives

Minimum requirement, 3 hours from the following:

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Bacteriology	Bact. 2	1	3	...	...	124
	Bact. 52 .....	...	...	1	3	124
Botany	Bot. 3	2	3	2	3	126
Chemistry	Chem. 57	3	3	3	3	129
Chemistry	Chem. 58	3	3	3	3	130
Geology	Geol. 51 .....	...	...	3	3	156
Mathematics	Math. 7, 61 or	3	...	3	...	168
	62	3	...	3	...	170
Physics	Phys. 3, 6, 8 or	3	2	3	2	191
	12 .....	...	...	...	...	192
Survey School	C. E. 6	Field work—2 weeks spring				132

UNIVERSITY OF ALBERTA

Agricultural Electives

Minimum requirement, 10 hours from the following, of which at least 4 hours must be lectures.

SUBJECT	Course No.	First Half Lect.	Half Lab.	Sec. Half Lect.	Half Lab.	Pge
Agric. Engineering	A. E. 53	1	3	1	3	114 ✓
Animal Husbandry	A. H. 51 .....	...	2	...	...	118
Animal Husbandry	A. H. 52	1	...	1	...	118
Animal Husbandry	A. H. 53	3	...	...	...	118
Animal Husbandry	A. H. 54 .....	...	...	1	2	119
Animal Husbandry	A. H. 55 .....	...	6	...	...	119
Animal Husbandry	A. H. 57 .....	...	...	...	2	119
Animal Husbandry	A. H. 68 .....	...	...	2	2	120
Entomology	Ent. 51	2	3	2	3	151
Field Husbandry	F. H. 51	3	...	3	...	153
Field Husbandry	F. H. 52 .....	...	...	1	2	153
Field Husbandry	F. H. 54 .....	...	...	...	4	154
Field Husbandry	F. H. 61	3	...	...	...	154
Field Husbandry	F. H. 62 .....	...	...	3	...	154
Horticulture	Hort. 52	2	2	2	2	163
Soils	Soils 53	2	4	...	...	199
Soils	Soils 54 .....	...	...	2	3	200
Soils	Soils 55 .....	...	...	2	...	200
Veterinary Science	Vet. Sci. 51	1	...	1	...	202
Dairying	Dairy 52	3	...	3	...	142
Dairying	Dairy 53	4	...	...	...	142
Dairying	Dairy 54 .....	...	...	4	...	142

THE DEGREE OF B.Sc. IN AGRICULTURE.

Entrance Requirements (General)

1. Students must produce evidence of having worked for a season (including seed-time and harvest) on a farm, affording a practical knowledge of ordinary farm operations. Or not having previous preparation the student will be required, before entering the third year, to spend six months on a farm, employed at practical farming. This knowledge may be tested by a practical examination.

Matriculation Requirements

- A. For matriculation into First Year Agriculture, students **having Grade IX and Grade X standing** will be required to present a Grade XI (or Junior Matriculation) certificate covering the following subjects:

AGRICULTURE

1. **English Composition.**
2. **English Literature.**
3. **History** (General and Canadian Constitutional).
4. **Arithmetic.**
5. **Algebra.**
6. **Geometry.**
- 7, 8 & 9. Three of the following: **French, German, Latin, Physics, Chemistry, Agriculture.**

Note: Beginning with September, 1926, one language will be required: either **French, German** or **Latin.**

- B. For matriculation into First Year Agriculture, students **not having Grade IX and Grade X standing** will be required to pass Grade XI (or Junior Matriculation) as in A, and in addition, pass in **English Grammar and British and Canadian History.**
- C. Students from the Provincial Schools of Agriculture will be admitted to the Second Year Agriculture upon presenting (1) matriculation certificates as in A or B, and (2) a certificate of qualification in Agriculture from any of the Provincial Schools of Agriculture.
- D. Students from the Provincial Schools of Agriculture presenting a certificate of qualification in Agriculture, but having incomplete matriculation may be given credit as matriculation subjects for the following:—**Agriculture, Chemistry, Physics.** Students with deficiencies can make arrangements with affiliated colleges to complete matriculation before they begin the Third Year.
- E. Students of mature age who have not yet completed matriculation as outlined above may present any special grounds which might entitle them to consideration for admission.

The attention of students is called to a Combined Course leading to the degrees of B.A. B.Sc. details of which are given on page 105.

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JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	First Half		Sec. Half		Page
		Lect.	Lab.	Lect.	Lab.	
Animal Husbandry	A. H. 1	2	2	...	...	118
Animal Husbandry	A. H. 2 .....	...	...	2	2	118
Field Husbandry	F. H. 1	2	2	2	2	152
Agric. Engineering	A. E. 1	1	3	1	3	113
Horticulture	Hort. 2	3	...	3	...	162
Dairying	Dairy 1	3 lec.-lab.		3 lec.-lab.		141
*Poultry .....	...	...	...	...	...	...
Entomology	Ent. 1	2	...	2	...	151
*Apiculture .....	...	...	...	...	...	...
Veterinary Science	Vet. Sci. 1	1	...	1	...	202
History of Agriculture.....	His. of Ag. 1	1	...	1	...	161
English	Eng. 1	3	...	3	...	147
Physical Education 1.....	Phys. Ed. 1 .....	...	2	...	2	204

*Not offered 1924-25.

JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	First Half		Sec. Half		Page
		Lect.	Lab.	Lect.	Lab.	
Chemistry	Chem. 1	3	3	3	3	127
Botany	Bot. 1	3	3	3	3	126
Zoology	Zool. 1	3	3	3	3	202
Physics	Phys. 1	3	2	3	2	191
Mathematics	Math. 1	3	...	3	...	167
*English	Eng. 1	3	...	3	...	147
History of Agriculture.....	His. of Ag. 1	1	...	1	...	161
Physical Education	Phys. Ed. 2 .....	...	2	...	2	204

*This course is for students who enter the Second Year from the Schools of Agriculture.

AGRICULTURE

SENIOR COURSES—THIRD YEAR

*25 to 30 hours to be selected, of which the following must be taken.
See asterisk.

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
*Animal Husbandry	A. H. 61	2	2	...	...	119
*Animal Husbandry	A. H. 62 .....	...	...	2	2	119
*Soils	Soils 51 & 52	2	4	2	4	199
*Field Husbandry	F. H. 50	2	2	2	2	153
*Agric. Engineering	A. E. 52 .....	...	...	1	3	114
*History of Agriculture	His. of Ag. 2	1	...	1	...	161
*Chemistry	Chem. 5	1	3	...	...	128
Political Economy	Pol. Ec. 2	2	...	...	...	196
Political Economy	Pol. Ec. 70 .....	...	...	2	...	197
Agric. Engineering	A. E. 51	1	2	1	2	114
Dairying	Dai. 51	3 lec.-lab.		3 lec.-lab.		141
Bacteriology	Bact. 2	1	3	...	...	124
Botany	Bot. 4 .....	...	...	1	2	126
Entomology	†Ent. 1	2	...	2	...	151
Elements of Irrigation and Survey School	Ent. 51	2	3	2	3	151
	C. E. 75	2	...	2	...	136
Mathematics	C. E. 6	Field work—2 weeks spring				132
	Math. 7, 61 or 62	3	...	3	...	168
Horticulture	Hort. 51	2	2	2	2	170
English	Eng. 3	1	...	1	...	162
French or	Fr. 1—3, or .....	...	...	...	...	148
German	Ger. 1—3	3	...	3	...	177
Physics	Physics 3	3	2	3	2	180
Chemistry	Chem. 4	3	...	3	...	191
Chemistry	Chem. 51, 57, or 58	3	3	3	3	128
						128
						129

†Available only to students entering the second year. Senior courses which are listed as electives may be taken in either the third or fourth year.

UNIVERSITY OF ALBERTA

SENIOR COURSES—FOURTH YEAR

24 to 28 hours to be selected from the following, of which not less than 6 hours must be selected from Group A subjects.

Group A

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Agric. Engineering	A. E. 53	1	3	1	3	114
Animal Husbandry	A. H. 63	1	...	...	...	119
Animal Husbandry	A. H. 64 .....	...	2	...	...	119
Animal Husbandry	A. H. 65	3	...	...	...	119
Animal Husbandry	A. H. 66 .....	...	...	1	2	120
Animal Husbandry	A. H. 67 .....	...	6	...	...	120
Animal Husbandry	A. H. 68 .....	...	...	2	2	120
Animal Husbandry	A. H. 69 .....	...	...	...	2	120
Animal Husbandry	A. H. 70 .....	...	...	1	...	120
Field Husbandry	F. H. 51	3	...	3	...	153
Field Husbandry	F. H. 52 .....	...	...	1	2	153
Field Husbandry	F. H. 54 .....	...	...	...	4	154
Field Husbandry	F. H. 61	3	...	...	...	154
Field Husbandry	F. H. 62 .....	...	...	3	...	154
Soils	Soils 53	2	4	...	...	199
Soils	Soils 54 .....	...	...	2	3	200
Soils	Soils 55 .....	...	...	2	...	200
Dairying	Dai. 52	3 lec.-lab.		3 lec.-lab.		141
Horticulture	Hort. 52	2	2	2	2	163
Dairying	Dai. 53	4	...	...	...	142
Dairying	Dai. 54 .....	...	...	4	...	142
History of Agriculture	Hist. of Ag. 51	1	...	1	...	161

Group B

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Half		Sec. Half		Pge
		Lect.	Lab.	Lect.	Lab.	
Agric. Bacteriology	Bact. 2	1	3	...	...	124
	Bact. 52 .....	...	...	1	3	124
Biochemistry	Bioch. 61	3	3	3	3	125
Botany	Bot.	3	3	3	3	126
Chemistry	Chem. 51, 57 or 58	3	3	3	3	128
	C. E. 75	2	...	2	...	136
Elements of Irrigation and Survey School	C. E. 6	Field work—2 weeks spring				132
	Eng. 54	1	...	1	...	149
Entomology	Ent. 62	2	4	2	4	152
Geology	Geol. 51 .....	...	...	3	3	156
Mathematics	Math. 7, 61 or 62	3	...	3	...	168
Physics	Phys. 3, 6, 8 or 12	3	2	3	2	191
	Pol. Ec. 72	2	...	2	...	198
Political Economy	Pol. Ec. 64	3	...	3	...	197
Veterinary Science	Vet. Sci. 51	1	...	1	...	202

ARTS AND AGRICULTURE

COMBINED COURSE IN ARTS AND AGRICULTURE

- First Year:**
1. English 1.
 2. History 1.
 3. Mathematics 1.
 4. Physics 1.
 5. 6. Latin, Greek, French, German: (two of these, one of which must be a modern language).
 7. Physical Education 1.

- Second Year:**
1. One course from Division A.
 2. One course from Division B.
 3. 4. Two courses from Division C. (Bot. 1 and Chem. 1).
 5. An option. (Students intending to select Mathematics or Physics in the Fourth Year should take Math. 22).
 6. Physical Education 2.

- Third Year:**
1. 2. Two courses from Division A.
 3. One course from Division B.
 4. One course from Division C (Geology 51).
- or
1. One course from Division A.
 2. 3. Two courses from Division B.
 4. One course from Division C. (Geology 51).

- Fourth Year:**
1. & 2. Two courses from Divisions A and B.
 3. One course from Division C (Bot. 52, Chem. 52, Physics 8, or Mathematics).
 4. History of Agriculture 1.
 5. Animal Husbandry 1 and 2.

The degree of B.A. may be granted on successful completion of the four years outlined above.

Fifth Year: As for the Third Year in Agriculture..

Sixth Year: As for the Fourth Year in Agriculture.

Note: Re Fifth and Sixth years. In case the student has taken any of these courses in a preceding year he may substitute an equivalent course.

UNIVERSITY OF ALBERTA

THE DEGREE OF B.H.Ec.

For those entering from the Provincial Schools of Agriculture.

For entrance requirements, see p. 38.

Junior Courses.

First Year: English 1.
History 1.
Mathematics 1.
Chemistry 1.
Physics 1.
Household Economics 31.
Physical Education 1.

Second Year: One course from Division A or B.
Political Economy 1.
Chemistry 52.
Zoology 1.
Bacteriology 2 (1st term).
Household Economics 32, 33.
Physical Education 2.

Senior Courses.

Third Year: One course from Division A or B.
Biochemistry 61.
Chemistry 59.
Hygiene and Sanitation 51.
Household Economics 56, 57, 58, 59.

SCHOOL OF PHARMACY

The University offers two courses in Pharmacy, one covering the requirements for registration as Licentiate of the Alberta Pharmaceutical Association, the other leading to the degree of B.Sc. The former covers two years and the latter four years of academic work.

The Licentiate course as outlined below is a minimum prerequisite to acquiring membership in the Alberta Pharmaceutical Association. The first year of this course may be taken by matriculants at any time, but application for registration in the second year will not be accepted until at least one-half of the apprenticeship term prescribed by the Association has been completed by the candidate.

PHARMACY

In lieu of the required apprenticeship service, candidates for registration as members of the Association who hold the B.Sc. degree in Pharmacy may offer one year's practical experience in the employ of a duly qualified pharmacist, provided that such service has been performed after their apprenticeship has been duly registered by the Registrar of the Alberta Pharmaceutical Association.

I—THE LICENTIATE COURSE FIRST YEAR

SUBJECT	Course No.	Lect. Hrs.	Lab. Hrs.	Pge
Accountancy	Acct. 1	3†	...	112
Botany	Bot. 3	2	3	126
Chemistry	Chem. 2	3	6	128
Latin	Lat. 36	1*	...	137
Mathematics	Math. 36	2*	...	169
Physics	Phys. 11	3	2	191
Physical Education	Phys. Ed. 1 .....	...	2	204

*Second half session.

†First half session.

SECOND YEAR

SUBJECT	Course No.	Lect. Hrs.	Lab. Hrs.	Pge
Chemistry	Chem. 3	3	3*	128
Materia Medica	M. M. 1	4	...	166
Pharmacy	Pharm. 1, 2 & 4	4	6	183
Physiology (Biochemistry)	Biochem. 2	1*	2*	125
Toxicology	Toxic. 1	1*	...	202
Physical Education	Phys. Ed. 2 .....	...	2	204

*Second half session.

II—THE B.Sc. DEGREE IN PHARMACY

For the outline of the course leading to this degree see the Faculty of Arts and Sciences, p. 78-79.

DEGREES WITH DISTINCTION

First Class General Standing

First Class General Standing is awarded to those students in Applied Science and in the general course in Arts who have obtained in the required senior courses an average of eighty-five per cent. or over.

UNIVERSITY OF ALBERTA

GRADUATE AND AD EUNDEM DEGREES

Candidates for higher degrees shall be under the supervision of the Committee on Graduate Studies.

The Degrees of M.A. and M.Sc.

1. A candidate for the Degree of Master of Arts or Master of Science, this degree to be sequent to the Bachelor's degree already held, must possess a Bachelor's degree from this University or be admitted **ad eundem gradum**, and before presenting himself for the higher degree must have held the Bachelor's degree for at least one academic year.

2. A candidate must proceed to the Master's degree by:

(a) **the pursuit of a prescribed course of study.** This course of study shall consist of, or be equivalent to, a full year of advanced work, and must form a cohesive whole with a definite aim. In connection with the courses prescribed a thesis may be required on a subject approved by the Committee; or

(b) **the carrying out of an investigation.** A candidate who chooses to carry out a piece of original investigation shall submit on or before April 1st of the year in which the degree is to be taken, a formal report embodying the results of the investigation, or submit a dissertation indicative of acquaintance with the methods of research, which shall be printed or typewritten, in standard format, and which shall be deposited in the University Library. During the period of the student's candidacy, no use of the material or results of the investigation shall be made without the formal sanction of the Committee on Graduate Studies. In all cases the subject of the investigation must receive the written approval of the head of the department concerned before it is submitted to the Committee on Graduate Studies as required in Section 3, and the report when completed shall be accepted only on the recommendation in writing of the department concerned. Every candidate will be required, in addition, to pass an examination, written or oral, on the subject within which his investigation lies. Such examination shall be conducted under the supervision of the Committee on Graduate Studies.

GRADUATE WORK

3. A candidate who elects to proceed to the degree by method—

- (a) must submit the course of study which he proposes to follow to the Committee on Graduate Studies for its approval on or before the first day of November of the year in which he undertakes his work for the degree; or
- (b) must submit the subject of the investigation he proposes to carry out, to the Committee on Graduate Studies, for its approval on or before the first day of November preceding the spring in which the degree is to be taken. Candidates are strongly recommended, however, to submit their applications to the Committee at the close of the preceding session. This is especially advisable for students wishing to work in scientific departments.

4. In respect of courses taken with a view to the fulfilment of the requirements for the Master's degree, the pass mark shall be 65 per cent., and no supplemental examinations shall be permitted. The mark of 65 per cent. applies also to all essays required in connection with courses for the Master's degree.

The Degree of B.Educ.

The degree of Bachelor of Education is awarded as a graduate degree under the Faculty of Arts and Sciences. The course is designed to cover two full years of graduate work, one of which must be taken in residence in this University.

Admission

Graduates of an approved University or College, holding a Bachelor's degree, may be enrolled as candidates, subject to the approval of the Committee on Graduate Studies.

Graduates of an approved University or College who have pursued graduate studies in any recognized institution in any of the subjects indicated in the appended program of studies, may receive credit for such work, provided, however, that credits shall not be given for more than the equivalent of the work of one Academic Year, and that the condition requiring residence study in this University for at least one year after graduation is complied with.

In order to be recommended for the Degree of Bachelor of Education the candidate must, in accordance with the program set out below, (1) complete the program of studies; (2) submit a thesis.

UNIVERSITY OF ALBERTA

- First Year:**
1. Philosophy 108.
History of Philosophical and Scientific Thought, Advanced Course.
 2. Psychology 51.
General and Experimental Psychology.
 3. Psychology 52.
Social Psychology and Social Anthropology.
 4. Psychology 55.
Educational Psychology.
- Second Year:**
1. Psychology 104.
General and Experimental Psychology, Advanced Course.
 2. Psychology 105.
Educational Psychology, Advanced Course.
 3. Education 54.
History and Philosophy of Education, Advanced Course.
 4. Education 53.
Modern Educational Systems and Problems.
 5. An option to be selected in consultation with the head of the Department of Philosophy.

Thesis

(a) The subject of the thesis shall be arranged for not later than the date on which the student enrolls as a second year graduate student. Students should consult with the Head of the Department of Philosophy and with the Professor under whom they will do their special research work.

(b) The subject of the thesis shall be submitted to the Committee on Graduate Studies not later than November first of the Academic Year in which the student expects to graduate.

Remarks

(a) Students who have completed any four of the full session courses outlined in the program of studies above may be recommended for the Degree of Master of Arts provided that the other conditions for the awarding of this Degree have been fulfilled.

(b) Students who have completed any of the courses in the above-mentioned program of studies as parts of their undergraduate work, may, if their undergraduate standing in these subjects has been of the grade required for graduate

DEGREE OF B.EDUC.

work, be allowed to select cognate subjects, or be allotted research work in lieu of classes. Such research work would be in addition to that ordinarily to be undertaken in the preparation of the thesis.

(c) In respect of courses taken for the degree of B.Educ. the pass mark shall be 65 per cent., and no supplemental examinations shall be permitted.

The Degree of B.D.

By an arrangement with the affiliated colleges, the degree of B.D. is offered by the University to graduates in the Faculty of Arts and Sciences who follow a course of study presented by the affiliated colleges and approved by the University Senate. For information regarding this course application may be made to the Registrar. The provisions of Section 4 under "The Degrees of M.A. and M.Sc." apply also to the degree of B.D.

Ad Eundem Degrees

Applications for **ad eundem degrees**, accompanied by diplomas, and a calendar of the institution conferring the degree, should be made to the Registrar.

THE DEGREE OF D.Sc.

The degree of Doctor of Science (D.Sc.) may be conferred by the University on persons who shall be deemed by the Senate, after report from the General Faculty Council, to have distinguished themselves by special research of learning in the domain of Science, subject to the following regulations:

A candidate for the degree of Doctor of Science must have received the degree of Master of Science or a degree equivalent.

A candidate must be a Bachelor of at least seven years standing before the degree can be granted.

The application must be based wholly on original work of merit carried out individually by the candidate or in co-operation with others. He shall, in the latter case, make a written statement indicating precisely the share he has personally taken in the work.

Application must be made in writing to the Committee on Graduate Studies and should be accompanied by four reprints of all papers submitted by the candidate. This application must be submitted before November 1st of the academic year in which it is proposed to take the degree.

The fee for this degree is \$85.00.

Details of Courses by Departments

The University reserves the right to modify or withdraw for the Session any of the Courses here outlined.

DEPARTMENT OF ACCOUNTANCY

Mr. Race, and special sessional Lecturers.

Junior Courses.

1. Principles of Accounting. 3 hrs.

The subject is approached from the point of view of management and control, and leads from reports, statements and balance sheets to the details of compilation. Single proprietorships, partnerships and companies, depreciations, reserves, reserve funds, standard forms and analysis of financial statements. For second year students in Commerce.

10. Accounting. Evening classes.

Theory and practice for Intermediate candidates, Institute of Chartered Accountants of Alberta.

Senior Courses.

51. Municipal Accounting. 3 hrs. sec. half.

For fourth year students in Civil Engineering.

52. Accounting. 3 hrs.

A continuation of Course 1, including special types of statements, departmental reports, branch accounting, consolidated balance sheets and statements of profit and loss, principles of cost accounts, profits, dividends, surplus, organization for accounting control, advanced theory and problems. For third year students in Commerce.

AGRICULTURAL ENGINEERING

53. Accounting.

For fourth year students in Commerce.
Not offered in 1924-25.

55. Business Administration.

3 hrs. first half.

For senior students in Commerce. (Not offered 1924-25).

60. Accounting.

Evening classes.

Advanced course for Final candidates, Institute of Chartered Accountants of Alberta.

DEPARTMENT OF AGRICULTURAL ENGINEERING

Professor J. Macgregor Smith

Junior Courses.

1. Agricultural Engineering.

1-3
~~2-2~~ hrs. lab.

✓ This course will be divided into (a) Drawing and (b) shopwork in carpentry or blacksmithing. The course in drawing will include the use of drawing instruments, and the making of simple drawing to scale.

The course in carpentry will cover the use, care and adjustment of the various tools. Exercises will be graded to teach the student the principles of general carpentry work, and the reading of simple drawings and blueprints.

The course in blacksmithing will cover simple forging operations, such as drawing, upsetting, welding, bending, twisting, punching, together with instruction in the proper use and care of the fire and tools.

The content of this course will be the same as outlined in A.E. 51

2. Similar to Agricultural Engineering 52.

1 hr. lect., 2 hrs. lab.

For students in B.S.A. course.

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Senior Courses.

51. Agricultural Engineering. 1 hr. lect., 2 hrs. lab.

MEI
The planning of farm buildings and farmsteads. Each student will be allowed to choose the types of buildings he wishes to design, and also to make the farmstead layout apply to his own requirements.

A brief study of materials of construction and the strength of materials, concrete work, application of heating, ventilating, lighting, water supply and sewerage disposal problems to agriculture.

Text-book: *Farm Buildings*, Foster and Carter.

✓ **52. Agricultural Engineering.** 1 hr. lect., 3 hrs. lab. sec. half.

A practical study of all lines of tillage, seeding, fertilizing, harvesting, and threshing machinery. Draft of plows and other implements. Belt lacing, rope work, pipe fitting, babbitting and soldering. In the laboratory an effort will be made to furnish students with all the different types of machines with which they must deal on the average Alberta farm. An opportunity will be given to study the machines with the aid of a laboratory manual. Each student will require a laboratory manual.

Text-book: *Equipment for the Farm and Farmstead*, Ramsower.

Nov

53. Agricultural Engineering. 1 hr. lect., 3 hrs. lab.

A study of the sources and applications of mechanical power on the farm. The demand for labor saving machinery has turned the attention of farmers to power equipment of various kinds. The object of the course is to enable students to become familiar more especially with the fundamental principles of the internal combustion engine, namely, valve timing, carburation, lubrication, ignition and sufficient practice in operation to enable them to locate and correct the most common troubles. The practical work will be along lines similar to those followed in the Farm Machinery course.

ANATOMY

DEPARTMENT OF ANATOMY

Professor Revell, Associate Professor Shaner, Lecturers Greene and Jackson, and the following Demonstrators for 1924-25; Drs. Adamson, Folinsbee, Geggie, Hepburn, Hustler, Bulyea.

4. Gross Anatomy of the Body-Wall and Thorax.

2 hrs. lect., 12 hrs. lab. first half.

This is the first course in Gross Anatomy and includes the osteology of the parts studied.

Text-books: *Text-book of Anatomy*, Cunningham, Gray, Morris (American edition by Jackson), Piersol, or Quain; *Manual of Practical Anatomy*, Cunningham; *BNA Terminology*, Barker; *BNA Regional and Systematic*, Emmel; *Dictionary*, Gould, Stedman, or Dorland; *Atlas* (for reference only) Toldt, Sobotta and McMurrich, Spalteholtz.

5. Gross Anatomy of the Abdomen and Pelvis.

2. Gross Anatomy of the Extremities.

2 hrs. lect., 10 hrs. lab. sec. half.

Text-books as for Anatomy 4.

10. Histology.

3 hrs. lect., 4 hrs. lab. first half.

The cell, the elementary tissues.

Text-books: *Histology*, Bailey, Jordan, Lewis and Stohr.

12. Splanchnology.

3 hrs lect., 7 hrs. lab. sec. half.

Continuing Anatomy 10 and preceding Anatomy 14.

The minute anatomy of the organs of the body.

Text-books as for Anatomy 10.

14. Embryology.

Combining with Anatomy 12.

Mammalian embryology.

Text-book of Embryology, Prentiss & Arey; *Development of the Human Body*, McMurrich.

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Senior Courses.

53. Gross Anatomy of the Head and Neck.

1 hr. lect., 8 hrs. lab. first half.

1 hr. lect., 4 hrs. lab. sec. half.

Text-books as for Anatomy 4.

54. Applied Anatomy.

1 hr lect., 2 hrs. lab.

A review of the work of the second year supplemented by the study of frozen sections, and having regard to medical and surgical application.

Text-books as for Anatomy 4; *A Manual of Surgical Anatomy*, Whittaker, or Beesley & Johnston; *A Cross Section Anatomy*, Eycleshymer and Shoemaker; *Surface Markings*, Rawlings.

56. Advanced Anatomy

Hours to be arranged.

Open to students who have completed the required work.

60. Neurology.

2 hrs. lect., 4 hrs. lab. sec. half.

Gross and minute structures of the central nervous system and organs of the special senses.

Text-books as for Anatomy 4 and Ranson, *Anatomy of the Nervous System*; Villiger, *Brain and Spinal Cord*.

For Dental Students.

6. Odontology.

1 hr. lect., 5 hrs. lab. first half.

1 hr. lect., 2 hrs. lab. sec. half.

Morphology of human teeth, occlusion and arrangement, deciduous teeth.

Text-books: *Dental Anatomy*, Black.

8. Comparative Odontology.

Combining with Anatomy 6 in the second half.

Text-books: *Comparative Dental Anatomy*, Dewey-Thompson.

For reference: *Origin and Evolution of Human Dentition*, Gregory.

ANATOMY

- 11. Histology.** 3 hrs. lect., 4 hrs. lab. first half.

Similar to Anatomy 10.
Text-books as for Anatomy 10.

- 13. Splanchnology and Embryology.** 1 hr. lect., 3 hrs. lab. first half.

A shorter course than Anatomy 12, but giving more attention to oral structures and their development.
Text-books as for Anatomy 10.

- 20. Gross Anatomy of Thorax.** 2 hrs. lect., 2 hrs. lab. first half.

The gross anatomy includes osteology.
Text-books: *Text-book of Anatomy*, Cunningham; Gray (English edition) Morris or Piersol; *Practical Anatomy*, Walmsley, Pt. 2; *BNA Terminology*, Barker; *Medical Dictionary*, Stedman, Dorland or Gould.

- 22. Gross Anatomy of Abdomen and Pelvis.** 1 hr. lect., 6 hrs. lab. sec. half.

Text-books as for Anatomy 20, and *Practical Anatomy*, Walmsley, Pt. 3.

- 23. Gross Anatomy of the Head and Neck.**
1 hr. lect., 2 hrs. lab. first half.
1 hr. lect., 5 hrs. lab. sec. half.

Text-books as for Anatomy 20, and Walmsley, Pt. 3.

For Students of Nursing.

- 9. Minute Anatomy.** 3 hrs.

Lectures and demonstrations on the tissues and organs, and on the development of the human embryo.

- 19. Gross Anatomy.** 3 hrs.

Lectures and demonstrations on systematic anatomy.

UNIVERSITY OF ALBERTA

DEPARTMENT OF ANIMAL HUSBANDRY

Professor Sackville and Assistant Professors Bowstead and Sinclair.

Junior Courses.

1. Types and Market Classes of Sheep and Swine.

2 hrs. lect., 2 hrs. lab. first half.

A consideration of the various types and market classes with special reference to present day market requirements. A study of the live animal will be linked up with a study of the carcass with a view to demonstrating the relationship existing between form and function.

Text-book: *Types and Market Classes of Livestock*, Vaughan.

2. Types and Market Classes of Beef Cattle, Dairy Cattle and Horses.

2 hrs. lect., 2 hrs. lab. sec half.

A consideration of the various types and market classes. A study of the live animals and, in the case of beef cattle, the carcass, with a view to showing the relationship between type and production or performance.

Textbook: *Types and Market Classes of Livestock*, Vaughan.

3 and 4. Breed Studies of Sheep and Swine, Beef Cattle, Dairy Cattle and Horses.

2 hrs. lect., 2 hrs. lab. first half.

(See A.H. 61.)

10. Feeds and Feeding. 2 hrs. lect., 2 hrs. lab. sec half.

(See A.H. 68.)

Senior Courses.

51. Management of Livestock. 2 hrs. lab. first half.

(See A.H. 64.)

52. Livestock Production. 1 hr. lect.

(See A.H. 63 and A.H. 70.)

53. Animal Breeding. 3 hrs. lect. first half.

(See A.H. 65.)

ANIMAL HUSBANDRY

- 54. Herd Book Studies and Breed Development.** 1 hr. lect., 2 hrs. lab. sec. half.
(See A.H. 66.)
- 55. Advanced Judging.** 6 hrs. lab. first half.
(See A.H. 67.)
- 57. Livestock Problems and Investigations.** 2 hrs. lab. sec. half.
(See A.H. 66.)
- 61. Breed Studies of Sheep, Swine, Beef Cattle, Dairy Cattle and Horses.** 2 hrs. lect., 2 hrs. lab. first half.
A study of the origin, characteristics and adaptability of the breeds. Judging types and representatives of different breeds according to their official standards. Text-book: *Types and Breeds of Farm Animals*, Plumb.
- 62. Feeding and Management of Livestock.** 2 hrs. lect., 2 hrs. lab. sec. half.
A practical course in the feeding and general management of cattle, horses, sheep and swine. Text-books: *Feeds and Feeding* (Abridged edition), Henry & Morrison; *The Book of Livestock*, Toole.
- 63. Markets.** 1 hr. lect. first half.
A consideration of the organization for the marketing of livestock. A study of world's markets as they affect the markets for, and marketing of, Canadian livestock and livestock products.
- 64. Livestock Management.** 2 hrs. lab. first half.
Problems relating to the housing, fitting for show and sale, and general care and handling of livestock.
- 65. Animal Breeding.** 3 hrs. lect. first half.
Application of the principles of breeding to the improvements of livestock, related phases of reproduction bearing on the breeding industry and approved methods of practice. Text-books: *Genetics in Relation to Agriculture*, Babcock & Clauses; or *Principles of Breeding*, Davenport.

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66. Herd Book Studies and Breed Development.

1 hr. lect., 2 hrs. lab. sec. half.

A review of the work of the outstanding improvers of the various breeds of livestock, together with a consideration of the leading sires and blood lines with which these names are identified. A study of the requirements of registration and transfer in the various breeds, as well as for official records in dairy cattle. Practical work in extending pedigrees with the use of herd, flock and stud books.

67. Advanced Judging.

6 hrs. lab. first half.

Advanced work in judging, classifying, grading and valuing the various types and classes of livestock.

68. Animal Nutrition.

2 hrs. lect., 2 hrs. lab. sec. half.

A study of the principles of nutrition, feeding standards, balanced rations, together with a consideration of the various feeding stuffs, with a practical application of their uses in feeding horses, cattle, sheep and swine.

Text-book: *Feeds and Feeding*, Henry and Morrison.

69. Livestock Problems and Investigations.

2 hrs. lab. sec. half.

Advanced work in some special phase of Animal Husbandry, in which the student is particularly interested. The subject to be chosen and approved of by the head of the Department not later than Christmas in the Third Year. To be worked out in consultation with an instructor.

70. Seminar.

1 hr. sec. half.

Discussion of problems pertaining to the production of various classes of livestock. Review of recent experimental work conducted by the leading experiment stations.

ARCHITECTURE

DEPARTMENT OF ARCHITECTURE

Professor Burgess

Courses 2 to 61 will not be offered during session 1924-25.

Junior Courses.

2. **Architectural Drawing.** 3 hrs. lab.

Applied to historical examples.

Text-book: Pierre Esquié, *Cinq Ordres d'Architecture*.

3. **Architectural Design.** 6 hrs. first half, 9 hrs. sec. half.

The application of traditional forms to simple problems; subjects involving the use of the Classical Orders and of typical methods of construction.

4. **History of Architecture.** 2 hrs.

Ancient architecture. General review of Egyptian and Assyrian architecture and detailed study of Greek, Roman and Byzantine architecture.

Text-book: Anderson & Spiers, *Greek and Roman Architecture*.

5. **Building Construction.** 6 hrs. lab.

Methods of employing, assembling, and framing materials in accordance with their various characteristics and the purposes for which each is suited. The principal elements of modern building work, such as, walls, floors, roofs, doors, windows, etc., treated from the point of view of practical and customary construction. Standard methods of construction.

Text-book: Mitchell's *Building Construction, Junior Course*.

6. **Decorative Arts.** 4 hrs. lab.

Study of decorative principles as applied to the various materials employed in building.

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Senior Courses.

- 51. Architectural Drawing.** 3 hrs. lab.
Rendering in line and wash; development in light and shade; perspective drawing.
- 52. Architectural Design.** 1 hr. lect., 9 hrs. lab.
Problems in planning and in the composition of elevations.
- 53. Architectural Design.** 1 hr. lect., 15 hrs. lab.
Planning and grouping of buildings and surroundings.
- 54. History of Architecture.** 2 hrs.
Mediaeval architecture. Romanesque and Gothic architecture throughout Europe. The Perpendicular and Tudor styles in England. Study of the principles of stone construction in arches and vaults.
Text-book: G. H. West, *Gothic Architecture in England and France*.
- 55. History of Architecture.** 2 hrs.
Renaissance and modern. The effects of the Renaissance movement as illustrated by architecture. The various characters exhibited by Renaissance architecture throughout Europe at various periods. The relation of modern architecture to past styles.
Text-books: W. L. Anderson, *Renaissance Architecture in Italy*; W. H. Ward, *Renaissance Architecture in France*; R. Bloomfield, *English Renaissance Architecture*.
- 56. Decorative Arts.** 3 hrs. lab.
Decoration as employed in minor materials used in architecture, metal, plaster, terra cotta, etc.
- 57. Decorative Arts.** 1 hr. lect., 3 hrs. lab.
An advanced course in decorative design.

BACTERIOLOGY AND HYGIENE

58. Specifications. 1 hr. first half.

The preparation of detailed description of architectural works with a view to entering upon and carrying out contracts.

60. Ventilation and Heating. 1 hr. first half.

The scientific bases on which the circulation and warming of air in buildings must be provided for. The principal means taken to meet these requirements.

Text-book: R. G. Carpenter, *Heating and Ventilating Buildings*.

61. Building Construction. 6 hrs. lab.

Advanced stage of Building Construction (Architecture 5), including the more essentially modern methods of construction; re-inforced concrete, etc.

Text-book: Mitchell's *Building Construction, Advanced Course*.

62. Architecture.

Optional course for students in 3rd and 4th years of Arts course.

The purpose of this course is to provide a basis for the intelligent appreciation of Architectural design as illustrated in historical monuments and in present day experience.

Text-books: A. D. F. Hamlin, *History of Architecture*; H. H. Statham: *A Short Critical History of Architecture*.

DEPARTMENT OF BACTERIOLOGY AND HYGIENE

Professor Rankin, Dr. Laidlaw, Dr. Shaw, Dr. Orr, and Dr. Harris

Bacteriology

Junior Courses.

1. Elementary Bacteriology.

1 hr. lect., 3 hrs. lab. first half.

Demonstrations in elementary bacteriology. Practical laboratory exercises, i.e., making of media, staining, etc.

Text-book: Jordan, *General Bacteriology*.

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2. Agricultural Bacteriology.

1 hr. lect., 3 hrs. lab. first half.

Demonstrations and lectures, elementary in character. Practical laboratory exercises in elementary bacteriology.

Senior Courses.

51. Pathogenic Bacteriology.

1 hr. lect., 2 hrs. lab.

The relation of bacteria and the higher parasites to disease. Cultivation of pathogenic microorganisms; isolation and identification of bacteria pathogenic to man, etc.

Text-book: Jordan, *General Bacteriology*.

52. Agricultural Bacteriology.

1 hr. lect., 3 hrs. lab. sec. half.

Plant diseases; study of specific microorganisms; soil bacteriology; dairy bacteriology.

Text-book: Marshall, *Microbiology*.

61. Elementary Bacteriology.

1 hr. lect., 3 hrs. lab. first half.

Demonstrations in elementary bacteriology. Practical laboratory exercises, i.e., making of media, staining, etc.

Text-book: Jordan, *General Bacteriology*.

Hygiene

Senior Courses.

51. Elementary Hygiene.

1 hr. first half.

The principles of sanitary science.

52. Hygiene and Sanitation.

1 hr. sec. half.

Points to be observed in design and construction of buildings to secure the best conditions of health.

BIOCHEMISTRY

53. Hygiene.

1 hr. and 8 2-hr. periods

This course is for Medical students and aims to give through the medium of lectures, demonstrations and inspections, the knowledge of preventive medicine, sanitation and hygiene necessary to the practitioner. Text-books: Parks & Kenwood, Roseneau, Park.

DEPARTMENT OF BIOCHEMISTRY

Professor Collip, and Dr. J. W. Scott

Junior Course.

1.

3 hrs. lect., 3 hrs. lab.

Physical and chemical principles forming basis for general physiology; chemistry of food and proximate physiological compounds; enzyme action; digestion; metabolism; diet; nutrition; calorimetry; chemistry of physiological fluids, blood, urine, sweat, and milk.

2.

1 hr. lect., 2 hrs. lab.
(six weeks) (2nd yr. Pharm. Lic.)

A short course in biochemical methods.

Senior Courses.

51. Pathological Chemistry. 3 hrs. lab. (4th yr. med.)

Routine examination of urine, both normal and pathological. Quantitative methods in blood and urine chemistry. Analysis of stomach contents.

52. Pathological Chemistry. 1 hr. lect. (5th yr. med.)

A lecture course on applied biochemistry in its relation to clinical medicine.

61. Biochemistry.

3 hrs. lect., 3 hrs. lab.

Same subject matter as Biochemistry 1. A senior subject open to students in Arts, Household Economics, and the degree course in Pharmacy.

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DEPARTMENT OF BOTANY

Professor Lewis, Mr. Moss and Miss Dowding.

1. **General Elementary Botany.** 3 hrs. lect., 3 hrs. lab.
Morphology, physiology of the cell; elements of vegetable morphology, anatomy and physiology, Mendelism, genetics.
Prerequisite: Physics 1.
2. **General Elementary Botany (Medicine and Dentistry)**
3 hrs. lect., 2 hrs. lab.
3. **General Elementary Botany (Agriculture and Pharmacy).** 2 hrs. lect., 3 hrs. lab.
Elements of vegetable morphology, anatomy and physiology, classification of flowering plants.
4. **Agricultural Botany (2nd year Agriculture).**
1 hr. lect., 2 hrs. lab. sec. half.
General vegetable physiology, diseases of plants, Mendelism and genetics.
Prerequisite: Botany 3.

Senior Courses.

51. 3 hrs. lect., 3 hrs. lab.
Anatomy and morphology of the principal groups of plants, palaeobotany; general principles of classification, genetics, evolution.
Prerequisites: Chemistry 51, Elementary Geology.
52. 3 hrs. lect., 3 hrs. lab.
Plant Physiology with special reference to the physiology of the cell, assimilation and conduction. Ecological consideration of the representative plant formations and associations of the North temperate belt.
Prerequisites: Chemistry 52, Geology 52.

Honours Courses.

101. **Palaeobotany.** 3 hrs. lect., 6 hrs. lab.
Evolution of modern groups of plants as illustrated by the structure of fossil types from various geologi-

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cal horizons, plant remains in peat, lignite, and coal.
Prerequisites: Botany 1, Botany 51 and 52, Geology 51 and 52.

102. Comparative Anatomy and Ecology.

3 hrs. lect., 6 hrs. lab.

Evolution of chief tissues and organs of plants treated from a comparative point of view.

Prerequisites: Botany 1, Botany 51 and 52, Chemistry 52, Bio-chemistry.

103. Comparative Distribution of Vegetation and Ecology.

3 hrs. lect., 6 hrs. lab.

Distribution of vegetation in time and space considered from a dynamical point of view. Antecology and synecology.

Prerequisites: Chemistry 52 and 54, Geology 52, Bio-chemistry.

Graduate Courses.

Graduate students who have had the necessary training and wish to carry on research in some field of Botany should consult the head of the department.

DEPARTMENT OF CHEMISTRY

Professor Lehmann, Associate Professor Walker, Assistant Professors Bridgeman and Sandin, Dr. Oddy,
Mr. Mair, Mr. Line, Mr. Kutz.

1. General Chemistry.

3 hrs. lect., 3 hrs. lab.

Lectures: Common non-metals and some of the metals and their compounds; fundamental laws and theories. Laboratory: The setting up of apparatus; titrations, and standardization of normal solutions; preparation and separation of a few substances as an introduction to quantitative analysis, and to illustrate some of the laws of chemistry; an introduction to qualitative analysis.

Text-books: Smith, *Chemistry for Colleges* (The Century Company), or McPherson and Henderson, *A Course in General Chemistry* (Ginn); Kendrick and DeLury (Macmillan); W. A. Noyes, *Qualitative Analysis* (Henry Holt).

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2. General Chemistry. 3 hrs. lect., 6 hrs. lab.

Lectures the same as Chemistry 1.

Laboratory: The quantitative determination of nitrogen, sugar, and a number of acids and bases, together with the laboratory work of Chemistry 1. For students in Medicine, Pharmacy and Dentistry.

Text-books as in Chemistry 1.

3. Organic Chemistry. 3 hrs. lectures throughout the year.
3 hrs. lab. second half.

Lectures: An introduction to both the paraffin and the benzene series.

Laboratory: The preparation of some organic substances. For students in Medicine, Pharmacy, and Dentistry.

Text-books: Remsen and Orndorff, *Organic Chemistry* (Heath and Company).

4. Organic Chemistry. 3 hrs. lect.

For students of Agriculture. The lectures of Chemistry 4 to be taken with Chemistry 52.

5. Quantitative Chemical Analysis. 1 hr. lect., 3 hrs. lab. first half.

A course in Volumetric and Gravimetric analysis, for students in Agriculture, preparatory to chemical soil analysis.

Text-book: Lincoln and Walton, *Elementary Quantitative Analysis* (Macmillan).

Senior Courses.

51. Inorganic Chemistry. 3 hrs. lect., 3 hrs. lab.

Lectures: Continuation of Chemistry 1 with special emphasis on the metals.

Laboratory: Qualitative analysis of inorganic bases and acids.

Text-books: Mellor, *Modern Inorganic Chemistry* (Longmans); W. A. Noyes, *Qualitative Analysis*.

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52. Organic Chemistry. 3 hrs. lect., 3 hrs. lab.

Lectures: a brief general outline of both the Paraffin and the Benzene series, with a somewhat fuller treatment of some of the groups of substances of general interest such as the fats and the carbohydrates.

Laboratory: the preparations of organic substances.

Text-books: Remsen and Orndorff, *Organic Chemistry*, (Heath and Co.)

53. Agricultural Chemistry. 3 hrs. lect., 3 hrs. lab.

Lectures: A general course including soils and fertilizers, fodders and feeding.

Laboratory: Simple methods of fodder analysis.

For students in Arts and Sciences.

54. Physical Chemistry. 3 hrs. lect., 3 hrs. lab.

Lectures: Fundamental concepts; Structure of matter; Properties of gases, liquids and solids; Thermochemistry; Solutions; Electrochemistry; Equilibrium; Phase rule; Colloid chemistry; Photochemistry.

Laboratory: Experiments on properties of gases, liquids and solids; Thermochemical measurements; Molecular weight determinations; Solubility and eutectic points; Dissociation and association; Conductivity; Concentration cells.

Text-books: Getman, *Outlines of Theoretical Chemistry*, (Wiley); Finley, *Practical Physical Chemistry*, (Longmans).

Not offered 1924-25.

56. Analytical Chemistry. 6 hrs. lab.

Laboratory: The quantitative determination of some inorganic acids and bases. Followed by the analysis of selected samples of ores, minerals and clays.

For students in Mining Engineering.

57. Agricultural Chemistry. 3 hrs. lect., 3 hrs. lab.

Lectures: Digestibility, assimilation, and function of nutrients; composition of fodders and expression of their nutritive value.

Laboratory: Analysis of fodders.

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For students in Agriculture.

Text-books: Kellner, *Scientific Feeding of Animals* (Macmillan); Lincoln and Walton, *Elementary Quantitative Analysis* (Macmillan).

58. Analytical Chemistry. 3 hrs. lect., 3 hrs. lab.

Lectures: Continuation of Chemistry 1; principles and methods of quantitative chemical analysis; gravimetric, volumetric, calorimetric; standardization of apparatus; sampling.

Laboratory: Work illustrating the lectures.

Text-books: Ostwald, *Foundations of Analytical Chemistry* (Macmillan); Foulk, *Notes on Quantitative Chemical Analysis* (McGraw-Hill).

59. Chemistry of Foods. 6 hrs. lab.

For students in Household Economics.

60. Electrochemistry. 2 hrs. lect. first half

For students in Electrical Engineering.

Lectures: Ionization, conductivity, electrode potentials, concentration cells, accumulators, Electroanalysis; Electroplating; Electrometallurgy; Industrial Electrochemistry.

Reference book: *Handbook for Electrical Engineers*.

61. Metallurgy. 1 hr. lect., 2 hrs. lab. first half
2 hrs. lab. sec. half.

For students in Third Year Dentistry.

Lectures: Methods of preparation and properties of metals and alloys used in dentistry.

Laboratory: Preparation of metals, alloys, amalgams, and cements; Examination of physical and chemical properties of metals; Analysis of alloys.

Text-book: Hodgen, *Practical Dental Metallurgy*. 5th Edition, (C. V. Mosley Company).

Honours Courses.

101. Organic Chemistry. 3 hrs. lect., 6 hrs. lab.

Lectures: Paraffin series, including unsaturated compounds; polymethylenes and purine derivatives; reading of assigned subjects.

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Laboratory: Organic preparations.

Text-books: Holleman, *Organic Chemistry* (Chapman and Hall or John Wiley).

102. Organic Chemistry. 3 hrs. lect., 6 hrs. lab.

Lectures: The benzene series; naphthenes; terpenes; hetero-cyclic and conjugated cyclic compounds; history of chemistry; reading of assigned subjects.

Laboratory: Organic chemical analysis; molecular weight determinations; determination of the constitution of organic compounds.

Text-books: Holleman, *Organic Chemistry* (Chapman and Hall or Wiley).

103. Physical Chemistry. 3 hrs. lect., 6 hrs. lab.

Lectures covering the same topics as in 54 but with more advanced treatment, and with greater emphasis on mathematical relations.

Laboratory: Practical measurements to illustrate the lecture course.

Text-books: Washburn, *Principles of Physical Chemistry*, (McGraw-Hill); Finley, *Practical Physical Chemistry*, (Longmans).

Prerequisite, Math. 55.

Not offered 1924-25.

104. Physical Chemistry. 3 hrs. lect., 6 hrs. lab.

Selected topics from Chemical Thermodynamics; Electrochemistry; Colloid chemistry; and Photochemistry.
Not offered 1924-25.

DEPARTMENT OF CIVIL AND MUNICIPAL ENGINEERING

Professor Wilson, Professor Robb, Professor Morrison
and Mr. Webb.

Junior Courses.

1. Applied Mechanics. 3 hrs. lect., sec. half.

Composition and resolution of forces; bending moments; shears and reactions; funicular polygon; stresses in simple framed structures; centre of gravity;

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moments of inertia; applications of funicular polygon to arches and hanging chains.

Prerequisite: Math. 21, 22.

Concurrent courses: Math. 25, 26.

2. Mapping. 3 hrs. lab., first half.

Topographical and conventional signs; contour maps and problems; plotting from notes; mine survey notes; problems on areas by latitudes and departures, division into triangles and planimeter; construction of small scale maps by polyconic or simple conic projection.

3. Materials of Construction. 2 hrs. lect.

General characteristics, manufacture and use of woods, metals and their ores, cast iron and malleable cast iron, wrought iron, steels, (corrosion of iron and steel), other metals and alloys, limes and plasters, cements, mortars, concrete, clay products, glass, building stones, masonry construction, oils and paints, asphalts, bitumens, etc., explosives.

Text-book: Johnson, *Materials... of... Construction* (Wiley).

6. Survey School. 4 weeks at end of sec. half.

Fieldwork, including chaining, rodding, levelling, transit work, plane table survey; plotting of field notes. Daily lectures on surveying methods; construction, adjustments and use of instruments; topography; contour surveying; mine surveying; descriptions for deeds; railway alignment problems; land system of the Dominion; Photographic surveying.

Text-book: Breed and Hosmer, *Surveying*, Vols. I and II (Wiley).

Prerequisite: Grade XII Trigonometry.

The fieldwork of this course is available to students in Agriculture.

7. Survey School. 4 weeks at end of sec. half.

Field work including adjustments of instruments; railway preliminary and location surveys; cross-sectioning; staking out buildings; determinations of azimuth,

CIVIL AND MUNICIPAL ENGINEERING

longitude, latitude and time by solar and stellar observations; base line measurements; angular measurements. Daily lectures on practical astronomy and geodesy including problems and methods of observing for latitude, time, longitude, and azimuth sufficient to meet the needs of the practical surveyor.

Text-book: Hosmer, *Astronomy* (Wiley).

Prerequisite: Math. 21.

10. Science and Engineering. 1 hr. lect., first half.

This course is a series of lectures on scientific and engineering topics. Its purpose is to point out to the student the important relations between science and modern industry, to impart an insight into some of the problems in the various branches of engineering, and to show the relation of other branches of learning to those of the engineering profession.

Senior Courses.

52. Foundations. 1 hr. lect.

Classification, examination and bearing power of soils; design of foundations; pile foundations; spread footings; coffer-dams; pneumatic caissons.

Text-book: Jacob and Davis, *Foundations for Bridges and Buildings* (McGraw-Hill).

Prerequisite: C.E. 67.

53. Theory of Structures. 3 hrs. lect.

Influence lines and maximum stresses under static and moving loads for beams; girders and trusses; lateral and portal bracing; viaduct towers and spaced frames; deflection and camber; method of least work; masonry structures; arches; suspension bridges.

Text-book: Spofford, *Theory of Structures* (McGraw-Hill).

55. Hydraulics. 3 hrs. lect., 3 hrs. lab. sec. half.

Fundamental principles considered and applied to problems on discharge from orifices, notches, weirs, pipes and open channels; theory of impact of jets, turbines, pumps, hydraulic transmission of power, accumulators and lifts; discussion of hydrology; stream

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measurements and waterpower development. Laboratory work illustrates principles and includes measurements of discharge from orifices and notches, tests of hydraulic ram, Pelton wheel, reaction turbine and centrifugal pump.

Text-book Gibson, *Hydraulics and Its Application* (Constable).

Prerequisite: Math. 25, 26.

- 57. Applied Thermodynamics.** 2 hrs. lect. first half.
2 hrs. lect., 3 hrs. lab. sec. half.

Fuel and combustion; steam boilers, engines, turbines and auxiliary machinery; the gas producer; internal combustion engine; compressed air; refrigeration.

Text-book: Ripper, *Steam Engine Theory and Practice* (Longmans & Co.)

Reference books: Clerk, *The Gas, Petrol, and Oil Engine* (Longmans & Co.); Robson, *Power Gas Producers* (Arnold).

Prerequisite: Math. 25, 26.

Corequisite: C.E. 67 or 70.

- 59. Water Supply and Sewage Disposal.** 2 hrs. lect., 3 hrs. lab.

Water Supply: Quantity, quality, and pressure requirements; rainfall and evaporation; collection and storage works; purification works; distribution system and details; designs and estimates.

Sewage Disposal: Separate and combined systems; collection methods; pipe layout and details; purification and dilution treatments; laws and regulations affecting sewage disposal.

Text-books: Turneure and Russell, *Public Water Supplies* (Wiley); Folwell, *Sewerage* (Wiley).

Reference: Metcalfe and Eddy, *American Sewerage Practice*, Vols. I, II, III (McGraw-Hill).

Prerequisite: C.E. 55.

- 62. Structural Design.** 1 hr. lect. first half.
1 hr. lect., 3 hrs. lab. sec. half.

Practical design of members in simple tension, columns and beams; rivets and rivetting; timber framing;

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loads on structures; roof trusses; building frame layouts; latticed columns, tension and compression members under direct stress and bending; eccentric connections. The design and detailing of a steel roof truss will be carried out in draughting room.

Text-book: Thayer, *Structural Designs*, Vol. I (Van Nostrand).

Prerequisite: C.E. 67 or 71.

63. Structural Design. 2 hrs. lect., 3 hrs. lab.

History of bridge engineering; plate girders, loads, floor systems, types, design; reinforced concrete buildings and bridges; slow burning mill construction. Designs of a plate girder bridge, a reinforced concrete building and a retaining wall will be done in the draughting room.

Prerequisite: C.E. 62, 67. Corequisite: C.E. 53.

66. Testing Laboratory. 3 hrs. lab.

Standard tests of materials of construction including reinforced concrete beams and columns.

Prerequisite: C.E. 67.

67. Applied Mechanics. 3 hrs. lect., 3 hrs. lab. first half. 2 hrs. lect. sec. half.

Lectures and exercises on the strength of materials and applied dynamics. Theory is illustrated by a large number of practical problems including applications to columns, beams and girders, continuous girders, shafting, thick hollow spheres and cylinders, rotating discs, reinforced concrete, hooks, etc.

Text-book: Morley, *Strength of Materials* (Macmillan).

Prerequisite: Math. 25, 26, C.E. 1.

70. Applied Mechanics. 3 hrs. lect. first half.

Shorter but similar to C.E. 67. Problems and applications are adapted to meet the needs of the mining engineer and include design of ropes, head-frames, etc. Text-book: Morley, *Strength of Materials* (Macmillan).

Prerequisite: Math. 25, 26, C.E. 1.

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- 71. Applied Mechanics.** 2 hrs. lect., 3 hrs. lab. first half.
2 hrs. lect. sec. half.

Lectures and exercises to include fundamental principles of statics and applications to problems arising in building construction such as columns, beams, girders, roof trusses, etc.

- 74. Land Transportation.** 3 hrs. lect.

Financing of railway and highway projects; economics of construction, operation and maintenance; construction details; methods of location; care of city streets.

Text-books: Blanchard, *Elements of Highway Engineering* (Wiley); Webb, *Railroad Construction* (Wiley).

- 75. Elements of Irrigation.** 2 hrs. lect.

A course for students in Agriculture who should also take C.E. 6 Field Work.

DEPARTMENT OF CLASSICS

Professor Alexander, Associate Professor Misener, Assistant Professor Hardy, Mr. Laycock.

Latin

Junior Courses.

- A. Matriculation Latin.** 4 hrs.

A course designed to enable students with a deficiency in entering Latin to satisfy the matriculation requirement in that subject.

Inglis and Prettyman, *First Book in Latin* (Macmillan); *Tales of Great Generals* (Lowe: Oxford); Ovid, *Metamorphoses*, Selections (Hall: Macmillan).

- 1. First Year Latin Authors.** 2 hrs.

Pliny, *Selections Illustrating Roman Life* (Keen: Macmillan); Plautus, *Menaechmi*; Sight Translation.

CLASSICS

3. First Year Latin Prose Composition. 1 hr.

A study of the major principles of Latin prose syntax; *The Latin Prose Composition of Baker and Inglis* (Macmillan).

2. Second Year Latin Authors. 2 hrs.

A Latin Reader (Petrie: Oxford), Selections illustrating Roman History, Literature and Antiquities. Sight Translation.

4. Second Year Latin Prose Composition. 1 hr.

Bi-weekly exercises in continuous Latin prose composition. Baker and Inglis, Pt. III (Macmillan).

36. Pharmaceutical Latin. 1 hr. sec. term.

A course in Latin essentials as required in the School of Pharmacy.

For reference students may procure: *Latin for Pharmacists* (Howe and Beard: Blakiston).

Senior Courses.

51. Latin Literature of the Republic, First Course. 3 hrs.

Cicero, *Select Letters* (Abbott: Ginn); Catullus, *Select Poems* (Merrill: Ginn). Sight translation; Latin Prose Composition.

52. Latin Literature of the Empire, First Course. 3 hrs.

Tacitus, *Annals I-IV* (Furneaux: Oxford); Martial, *Select Epigrams* (Bridge and Lake, Vol. I: Oxford). Sight translation; Latin prose composition. Course for third and fourth year students in 1924-25.

53. Latin Literature of the Empire, Second Course. 3 hrs.

Seneca, *Epistulae Morales* (Summers: Macmillan); Martial, *Select Epigrams* (Bridge and Lake, Vol. II: Oxford). Sight translation; Latin prose composition.

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- 54. Latin Literature of the Republic, Second Course.** 3 hrs.
Cicero, *De Officiis* (Holden: Cambridge); Lucretius, *De Rerum Natura I, III, V* (Merrill: American Book Co.) Sight translation; Latin prose composition.
- 55. Latin Literature of the Empire, Third Course.** 3 hrs.
Tacitus, *Agricola, Germania, Dialogus*; Horace, *Satires and Epistles*. Sight translation; Latin prose composition.
- 56. Latin Literature of the Empire, Fourth Course.** 3 hrs.
Tacitus, *Histories I and II*; Lucan, *Pharsalia* (selections). Sight translation; Latin prose composition.
- 57. Latin Literature of the Republic, Third Course.** 3 hrs.
Plautus, *Aulularia*; Terence, *Heautontimoroumenos*; Cicero, *Second Philippic*. Sight translation; Latin prose composition.

Honours and Graduate Courses.

- 102. Latin Comedy.** 2 hrs.
- 103. Lucretius.** 2 hrs.
The critical and exegetical study of a designated book and the careful reading of the entire poem.
- 104. Latin Literary Criticism.** 2 hrs.
A study of the outlook and objects of Latin literary criticism as illustrated by Horace in the literary epistles and by Quintilian in the tenth book of the *Institutio Oratoria*.
- 105. Vergil, Aeneid.**
The critical and exegetical study of Bk. VI; the reading of Books I-VI in the original, and VII-XII, in translation; (Particular attention will be paid to the literary history of the Epic and its technique).
- 111. Advanced Latin Prose Composition.** 1 hr.
Weekly exercises in Latin prose composition of the various styles.

CLASSICS

113. **Advanced Latin Sight Translation.** 1 hr.

Weekly exercises in translating Latin prose and verse at sight.

Greek

Attention is directed to the fact that beginning with the academic year 1920-21, Greek was made wholly a university subject. The language can therefore be begun in college and this beginning course is credited towards a degree.

Junior Courses.

1. **Beginning Greek.** 3 hrs.

The fundamentals of Greek syntax; elementary Greek composition and reading.

Benner and Smyth's *First Greek Book* (American Book Co.); Colson's *First Greek Reader* (Macmillan).

2. **Second Year Greek Authors.** 2 hrs.

Herodotus, (Farnell: Macmillan); Euripides, *Alcestis* (Bond and Walpole: Macmillan). Sight translation.

4. **Second Year Greek Composition.** 1 hr.

Review of Greek forms. More difficult sentences for translation into Greek.

Senior Courses.

51.

Thucydides VI and VII (Perry; American Book Co.); Sophocles, *Oedipus Tyrannus* (Jebb, Abridged; Cambridge); Aristophanes, *Birds* (Merry: Oxford).

Honours and Graduate Courses.

101.

Homer, *Odyssey Bks. VI-XII* (Merry, Oxford). A study of the epic technique and the language of Homer, and of life in the Homeric world.

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Classics in English

51. Greek Literature from Homer to the Alexandrians.

3 hrs.

A study of the culture and influence of Greece based chiefly upon its literary documents for the period indicated in the title of the course. No knowledge of the original language is required as the literature will be taken up through translations.

Required in the Second Year of students looking forward to Honours in English or in Classics (with Ancient History 51 as an alternative for classical students); open to all students in the third and fourth years as an option in Group A (languages and literature).

Livingston: *The Greek Genius* (Oxford).

Casson, *Ancient Greece* (Oxford).

Ancient History

51. The Greek City State.

3 hrs.

The political geography, physical geography, economics and industrial history of Ancient Greece. The city-state which developed in this environment, more especially Athens, its constitution, government, politics and sociology.

Zimmern, *Greek Commonwealth* (Oxford); Bury *Short History of Greece* (Macmillan); Casson, *Ancient Greece* (Oxford).

COMMERCIAL LAW

Professor Kleven.

1. Commercial Law.

3 hrs.

General principles of mercantile law, including contracts, partnership and agency, real and personal property, company and municipal law, bills of exchange, law and practice of bankruptcy.

For students in third and fourth year Commerce.

Text-book: Auger, *Canadian Mercantile Law*; Selected Statutes and Cases.

DAIRYING

DEPARTMENT OF DAIRYING

Professor Marker.

Junior Course.

1. General Dairying. 3 hrs. lect.—lab.

- (1) Some aspects of the development and economic importance of the dairy industry and its organization, with special reference to Alberta conditions.
- (2) The composition, physical properties, sanitary production, testing, separation, handling and marketing of milk and cream for direct consumption and for the purposes of manufacture; the recording of production of individual cows in the dairy herd and the utility of such records.
- (3) The manufacture of butter and cheese and the legal standards and other provisions which apply to the production and marketing of dairy products under farm conditions.

Laboratory practice will be given in the testing of dairy products by the Babcock and other tests, in the operation of centrifugal cream separators, and in the manufacture of butter and cheese on a home dairy basis.

Senior Courses.

51. General Dairying. 3 hrs. lect.—lab.

- (1) Some aspects of the development and economic importance of the dairy industry and its organization with special reference to Alberta conditions.
- (2) The production, composition and physical properties of milk and the commercial testing of dairy products.
- (3) Principles and practice of making butter, cheese and ice cream in the home dairy, and the marketing of dairy products.

52. Factory Dairying. 3 hrs. lect.—lab.

An extension of Course 51, with special application to dairy factory operations. Instruction and laboratory

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practice will be given in the principles and use of various tests for composition and in the commercial grading of the quality of dairy products. Dairy legislation and phases of factory management.

53. Testing and Grading of Dairy Products.

4 hrs. lect.—lab. first half.

This course will deal with the commercial testing and grading of milk, cream, butter and cheese—for composition and quality.

54. Factory Dairying.

4 hrs. lect.—lab. sec. half.

An extension of Course 1, with special application to dairy factory operations.

DEPARTMENT OF DENTISTRY

Drs. Bulyea and Gilchrist.

Junior Courses.

1. Prosthetic Dentistry.

1 hr. lect., 5 hrs. lab.

A study of the muscles of mastication; the mucous membrane; the teeth; impression materials; impression taking; casts; artificial teeth; dentures; occlusion and articulation; waxing, festooning, investing, packing, vulcanizing, finishing, and polishing full and partial dentures; retention of dentures; vulcanite bases; repairing dentures.

Text-book: Prothero's *Prosthetic Dentistry*.

Reference: Wilson's *Dental Prosthetics*; *American Text-book of Prosthetic Dentistry*.

2. Operative Dentistry.

1 hr. lect., 2 hrs. lab. first half.

1 hr. lect., 5 hrs. lab. sec. half.

Lectures and demonstrations on nomenclature, dental caries, use of instruments, filling materials and operative methods.

Laboratory course on cavity preparation, filling procedure, instrument making, general operative work. Reference: *Operative Dentistry*, Black, Johnson, and Clyde Davis.

DENTISTRY

3. **Prosthetic Dentistry.** 1 hr. lect., 2 hrs. lab.

- (a) Examination of patients; impression, methods, materials; trays, adjusting, individual; taking bite; occlusion and contour models; selecting teeth; face bow; anatomical occlusion; principles of retention, mucosa support, mechanical supports; bases, vulcanite, celluloid, aluminum, gold, partial dentures.

Text-book: Prothero's *Prosthetic Dentistry*.

Reference: Wilson's *Dental Prosthetics*; *American Text-book of Prosthetic Dentistry*.

Crown and Bridge. 1 hr. lect., 2 hrs. lab.

- (b) History of crown and bridge work; crowns and bridges, where indicated, preparation and treatment of roots; varieties of crowns and bridges; grinding, casting, swaging occluding; repairing; causes of failure in crown and bridge work.

Text-book: Prothero's *Prosthetic Dentistry*.

Reference: Evans' *Crown and Bridge*; Goslee's *Principles and Practice of Crown and Bridge Work*.

DEPARTMENT OF DRAWING AND DESCRIPTIVE GEOMETRY

Associate Professor Adam.

1. **Architectural Drawing.** 3 hrs.

Geometrical representation of architectural subjects, more especially the classical orders of architecture.

2. **Elementary Mechanical Drawing.** 3 hrs.

Use of instruments, projection, simple machine details, timber framing, tinting, tracing, and blue printing. Freehand sketching of machine parts. Lettering and titles.

3. **Freehand and Lettering.** 6 hrs.

A course related to Architecture, comprising perspective views, drawing from casts of ornament and from natural forms; lettering.

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4. **Descriptive Geometry.** 1 hr. lect., 3 hrs. lab.

Geometrical drawing, orthographic and metric projection, problems on lines and planes, sections and developments, conic section and other curves, curved surfaces and tangent planes, shades and shadows.

5. **Mechanical Drawing.** 3 hrs.

Preparation of working drawings from dimensioned sketches; problems on motion under mechanical constraint, including graphical methods of finding velocity and acceleration; linkwork, cams, gearing.

DEPARTMENT OF ELECTRICAL ENGINEERING

Professor Boyle, Professor MacLeod and
Assistant Professor Morgan.

History of Science.

For the present the Department of Electrical Engineering is giving the course in History of Science. The course is a brief introduction to the general History of Science touching on the greatest scientific discoveries and their interest and importance.

Text-books: *History of Science*, Libby; *Science and the Human Mind*, Whetham.

51. **Applied Electricity.** 3 hrs. lect., 3 hrs. lab.

(a) A brief review of the laws of electromagnetism, electric and magnetic circuits and the units used in electrical engineering. The theory and characteristics of direct current machinery and storage batteries. A short introduction to the principles of alternating current machinery.

(b) Direct Current Laboratory.

The determination of the characteristics, regulation and efficiency of direct current machines; the use of measuring instruments, controlling and protective devices; the characteristics of storage batteries.

The laboratory reports include a comparison of the results of experiment with those determined from theory and calculation.

ELECTRICAL ENGINEERING

Required of fourth year students in Electrical Engineering.

Text-book: Christie's *Electrical Engineering*.

Reference: Dawes' *Electrical Engineering*.

- 53. Applied Electricity.** 2 hrs. lect., 3 hrs. lab. first half.
2 hrs. lect., sec. half.

The laws of electromagnetism; continuous and alternating current flow in various circuits; characteristics of direct and alternating current machinery with a consideration of the class of work to which each machine is suited; the fundamental principles of electric traction, lighting and power distribution.

The laboratory course includes the determination of the characteristics and efficiency of various machines; the use of measuring instruments, controlling and protecting apparatus.

Text-book: "*Principles and Practice of Electrical Engineering*," Gray.

Required of fourth year students in Civil and in Mining Engineering.

- 54. Machine Design.** 2 hrs. sec. half.

The principles of stresses and strength of materials as applied to particular parts of machines and machine fastenings, such as bolts, nuts, keys, cotters, and riveted joints. Required of fourth year students in Electrical Engineering.

Text-book: Unwin, *Machine Design, Part I* (Longmans, Green).

- 55. Mechanics of Machines.** 1 hr. lect., 1 hr. lab. sec. half.

The principles involved in the design of gears, gear trains, valves, valve gears, flywheels, governors. The theory of balancing.

References: Durley, *Kinematics of Machines*, Wiley; Ripper, *Steam Engine Theory and Practice*, Longmans & Co.

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- 76. Alternating Currents.** 3 hrs. lect., 6 hrs. lab.
- (a) The theory of alternating currents. A detailed consideration and analysis of the theory and characteristics of alternating current machinery. Text-book: Christie's *Electrical Engineering*. Reference books: Lawrence's *Principles of Alternating Current Machinery*; Dawes' *Electrical Engineering, Vol. II*.
- (b) Alternating Current Laboratory.
The experiments are designed mainly to illustrate the theory of the course and when possible the results of experiment will be checked by calculations from machine data. Practice in the operation and control of the machines in the University powerhouse is also afforded.
Reference books: Ricker and Tucker *Electrical Engineering Laboratory Experiments*; Karapet-off's *Experimental Electrical Engineering, Vol. II*.
- 77. Electrical Design.** 1 hr. lect., 2 hrs. lab.
The design of generators, motors and transformers. The preparation of specifications.
Text-book: Gray's *Electrical Machine Design*.
- 78. Electric Power Transmission and Distribution.** 2 hrs. lect.
The design of transmission and distribution lines for direct and alternating current systems and a consideration of the economic, electrical and mechanical principles involved. The design and operation of electric power-plants and substations. The preparation of plans and specifications.
Reference books: Still's *Electric Power Transmission*; Weingreen's *Electric Power-Plant Engineering*; *Standard Handbook for Electrical Engineers*.
- 79. Electric Railways.** 2 hrs. lect. first half.
The principles of train operation; distribution system; Substation location and design; Electric Railway equipment and types of systems.
Reference books: Harding's *Electric Railway Engineering*; Buck's *The Electric Railway*.

ENGLISH

80. **Telegraphy and Telephony.** 2 hrs. lect. sec. half.

The theory of the propagation of electric waves in space and electric currents in telephone and telegraph conductors. Oscillatory circuits. Characteristics of the thermionic valve. Loaded lines. Wired and wireless telegraph and telephone systems including long distance, automatic and carrier current systems; localization of faults.

Reference books: Turner's *Wireless Telegraphy and Telephony*; Fleming's *The Propagation of Electric Currents in Telephone and Telegraph Conductors*; Miller's *American Telephone Practice*; McNichol's *American Telegraph Practice*.

81. **Industrial Applications of Electric Power.** 2 hrs. lect. sec. half.

- (a) Illumination and Photometry.
The laws of Illumination; standards of light; photometers; the characteristics of electric lamps; interior and exterior illumination.
- (b) Industrial motor applications. Electric furnaces and electric welding. General applications.
- (c) Standards of the A.I.E.E.; National Electric Code. The Electrical Protection Act. Specifications and Contracts.

Reference books: *Radiation Light and Illumination*, Steinmetz; *Electric Lighting*, Ferguson; *Standard Handbook for Electrical Engineers*.

DEPARTMENT OF ENGLISH

Professor Broadus, Professor Gordon, Mr. F. M. Salter and
Mr. J. T. Jones.

Junior Courses.

1. **Composition and Literature.** 3 hrs.

Practice in composition and study of selected texts, *Century Handbook of Writing*; *Century Book of Selections*.

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The following books are prescribed, in part as illustrative material for the work in composition, in part as an approach to the appreciation of certain types of literature: Shakespeare, *Romeo and Juliet* (Lake English Classics); Boswell's *Johnson*, (selections, ed. Chapman, Oxford); Stevenson's *Essays* (The Modern Student's Library, Scribner's); *English Short Stories* (World's Classics, Oxford); Thackeray, *Henry Esmond*, with *The English Humorists* and *The Four Georges* (Oxford); *An Anthology of Modern Verse* (Methuen).

2. **A General Reading Course in English Prose.** 3 hrs.

A survey of English prose from the seventeenth century to the present day, based on selections from the following authors: Bacon, Browne, Milton, Dryden, Swift, Addison, Richardson, Fielding, Johnson, Sterne, Smollett, Burke, Scott, Coleridge, Jane Austen, Lamb, Hazlitt, Carlyle, Macaulay, Thackeray, Dickens, George Eliot, Ruskin, Arnold, Stevenson, Meredith and Hardy.

English Prose from Bacon to Hardy, edited by E. K. Broadus and R. K. Gordon (Oxford Press).

3. **Composition for Students in Agriculture.** 1 hr.

Written and oral themes on agricultural topics.

Senior Courses.

English 2, or an equivalent in mental discipline, is prerequisite to all senior courses in English Literature.

52. **A History of English Fiction.** 3 hrs.

Lectures and class discussion.

Students are required to read the following works: Lodge's *Rosalind*; Bunyan's *Pilgrim's Progress*; Defoe's *Robinson Crusoe*; Smollett's *Roderick Random*; Richardson's *Clarissa Harlowe*; Fielding's *Tom Jones*; Sterne's *Tristram Shandy*; Goldsmith's *Vicar of Wakefield*; Scott's *Waverley*; Jane Austen's *Pride and Prejudice*; Dickens' *David Copperfield*; Thackeray's *Vanity Fair*; Trollope's *Barchester Towers*; Charlotte

ENGLISH

Bronte's *Jane Eyre*; George Eliot's *Adam Bede*; Meredith's *The Egoist*; Hardy's *The Return of the Native*, and the selections in *The English Novel Before the Nineteenth Century*, edited by Hopkins and Hughes (Ginn); Cross, *The Development of the Novel* (Macmillan). (Not offered 1924-25).

53. Shakespeare. 3 hrs.

Lectures and class discussion.

Special study of the following plays: *Midsummer Night's Dream*, *Twelfth Night*, *The Tempest*, *Romeo and Juliet*, *Hamlet*, *King Lear*.

Collateral reading: *King John*; *Henry IV, Part I*; *Henry IV, Part II*; *Henry V*; *The Tudor Shakespeare* (Macmillan).

54. Composition for Students in Agriculture. 1 hr.

Written and oral themes on agricultural topics.

57. Studies in the Poets of the Romantic Period. 3 hrs.

Lectures and class discussion.

Coleridge, Scott, Byron, Shelley. Editions in the World's Classics (Oxford).

Wordsworth, *Poetry and Prose* (ed. D. Nichol Smith: Oxford).

Keats, *Poetry and Prose* (ed. H. Ellershaw: Oxford). (Not offered 1924-25).

58. Browning and Tennyson. 3 hrs.

Lectures and class discussion.

The Globe Editions (Macmillan). (Not offered 1924-25).

59. Nineteenth Century Prose. 3 hrs.

Lectures and class discussion.

Study of Burke, J. S. Mill, Carlyle, Newman, Arnold, Ruskin, Huxley, as representative of English thought from the time of the French Revolution.

Burke, *Reflections on the French Revolution* (World's Classics); J. S. Mill, *Utilitarianism* (Everyman's

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Library); Carlyle, *Sartor Resartus*, edited by MacMechan (Ginn); *Heroes and Hero-Worship*, edited by MacMechan (Ginn); *Past and Present* (World's Classics); Newman, *Apologia* (Oxford); *Idea of a University* (Selections, Houghton Mifflin); Arnold, *Selections* (Holt); Ruskin, *Selections and Essays* (Scribner's); Huxley, *Lay Sermons* (Selections, Everyman's).

60. Milton. 3 hrs.

Lectures on essential aspects of seventeenth century life and literature. Special study of *Paradise Lost*, and of selections from the prose works and minor poems.

Milton's Poetical Works (Oxford); *Selected Essays of John Milton* (Houghton Mifflin).

62. Chaucer. 3 hrs.

Lectures on English mediaeval life and literature. Special study of Chaucer's *Troilus and Criseyde*, and of the *Canterbury Tales*.

Chaucer's Works (Oxford).

Honours.

Group A:

108. History of Literary Criticism. 3 hrs.

Study of selected essays illustrating the development of critical theory and practice. (Not offered 1924-25).

109. Conference Course. 3 hrs.

Special topics to be arranged in consultation with the instructor.

The following second year programme is prerequisite for Honours in Group A: English 2, Classics in English 51, History 2, a foreign language, an option.

Group B:

104. Old English and History of the English Language.

Emerson, *History of the English Language* (Macmillan); Sweet, *Anglo-Saxon Primer* (Oxford); Chambers and Wyatt, *Beowulf* (Cambridge University Press).

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105. Middle English Literature and Chaucer. 3 hrs.

Emerson, *Middle English Reader* (Macmillan);
Chaucer, *Works* (Oxford).

Open only to students who have taken 104.

The following second year programme is prerequisite
for Honours in Group B: English 2, Classics in Eng-
lish 51, Latin or French, History 3, an option.

DEPARTMENT OF ENTOMOLOGY

Professor Strickland.

Junior Courses.

1. General Economic Entomology. 2 hrs. lect.

Structure and habits of insects in relation to their
economic importance. Principles of control methods.
Life histories and control of more important insect
pests.

Text-book: Lochhead, *Economic Entomology*.

Senior Courses.

51. Entomology. 2 hrs. lect., 3 hrs. lab.

Insect morphology, external and internal; characters
used in classification; development and ecology.

Text-book: Folsom, *Entomology with reference to its
Ecological Aspects*.

Reference book: Comstock, *Manual for the Study of
Insects*.

52. Pests of Special Groups. 2 hrs.

The work will be selected from the special groups that
meet the needs of the student. Field, laboratory and
reference work.

Prerequisite: Entomology 1 and Entomology 51.

Not offered in 1924-25.

61. General Entomology. 3 hrs. lect., 3 hrs. lab.

Insect morphology, external and internal; develop-
ment; ecology; recognition of common species; insects
of economic importance, and methods of control.

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Course designed for students who are prospective teachers of biology.

Text and Reference books: (See Ent. 51).

62. Taxonomy and Technique. 2 hrs. lect., 4 hrs. lab.

Classification of Insects; methods of studying life-histories; breeding, mounting and preserving insects. Text-book: Brues and Melander, *Key to the Families of North American Insects*; Comstock, *Manual for the Study of Insects*.

Prerequisite: Entomology 51 or 61.

DEPARTMENT OF FIELD HUSBANDRY

Professor Cutler, Professor Newton, and

Assistant Professor Fryer.

Junior Courses.

1. Elementary Field Husbandry.

(a) Crop Production.

2 hrs. lect.

This course is intended to give a general knowledge of the principles and practice of the science of crop production. It includes a study of the methods of recording climatic changes; climate in general as related to farm crop distribution; and climatic factors of Alberta in particular in relation to crop production. An introduction is also given to the more detailed and intensive study of the various phases of the subject of field husbandry which are taken later.

(b) Crop Plants and Seeds.

2 hrs. lab.

An introductory study is made of the structure and function of seeds, germination, plant growth and embryogeny of seeds. This is followed by studies in the identification of the principal varieties of crop plants and weeds, and their seeds.

Text-books: Carleton, *The Small Grains*; Percival, *Agricultural Botany*; Robbins, *Botany of Crop Plants*.

4. Farm Crops.

2 hrs. lect., 2 hrs. lab.

See F. H. 50.

FIELD HUSBANDRY

Senior Courses.

50. Farm Crops. 2 hrs. lect., 2 hrs. lab.

Grasses, cereals, flax, legumes, sunflowers, roots and potatoes. In this course the aim is to give the student an intimate knowledge of all the more important farm crops. Botanical structures and relationships, and varietal characteristics are systematically studied. Laboratory practice is given in the identification and classification of species and varieties, especially of the common grasses and cereals. Economic aspects, including distribution, adaptation, uses and values, are briefly reviewed. Wild grasses are studied in relation to their importance on the range lands of the province. Prerequisite: F.H. 1 or equivalent credit, Bot. 1. Text-books: Robbins, *The Botany of Crop Plants*; Clarke and Malte, *Fodder and Pasture Plants*.

51. Crop Management. 3 hrs. lect.

(a) Dry Farming Conditions.

A detailed study of the choice, adaptation and distribution of the most suitable farm crops, together with the best methods of soil preparation for different soil and climatic conditions met with in the successful production of crops on non-irrigated lands in Alberta. This course includes also a study of crop rotations, methods of harvesting, curing, threshing, storage, etc., of all farm crops, as well as a brief survey of farm crops and farm crop practice in Canada and the United States as a whole. Crop management investigations on the Great Plains will be examined and appraised as the lecture work proceeds.

(b) Irrigation Conditions.

Same as (a) for Irrigation Farming.

Prerequisite: F.H. 1 or equivalent credit; F.H. 50; Soils 51 and 52; Entomology 1 or equivalent credit.

52. Economic Aspects of Crop Production. 1 hr. lect., 2 hrs. lab. sec. half.

This course includes a careful study of world supplies and demands in relation to the Canadian grain and

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seed trades; details of Canadian legislation with respect to commercial grain and seed, and of the methods and facilities for handling Western Canadian surpluses. Grain and seed inspection standards and methods are taken up with practice in grain and seed inspection. Not offered 1924-25.

53. (See F.H. 61).

54. Seeds.

4 hrs. lab. sec. half.

Review of fertilization, embryogeny, structure, function and germination of seeds, followed by an intensive study of identification of economic and weed seeds, variety characteristics, seed and grain grading, inspection and judging of agricultural seeds and grains.

55. (See F.H. 62).

61. Genetics.

3 hrs. lect., first half.

An introductory course giving a survey of the field of genetics and designed to acquaint the student with the laws of variation and heredity with some suggestions of their application to the improvement of plants and animals.

62. Principles and Methods of Plant Breeding.

3 hrs. lect., sec. half.

A study of the application of genetic principles to plant breeding, with special reference to the role of hybridization and selection in plant improvement. The technique of plant breeding, plot management, use of checks and replicates, yield corrections, experimental error and interpretation of results, systems of seed distribution, and methods of pure seed production by farmers.

Prerequisite: F.H. 50 and F.H. 61.

Honours Courses.

101. Advanced Farm Crops.

111. Advanced Genetics and Plant Breeding.

FIELD HUSBANDRY

121. **Plant Biochemistry.** 3 hrs. lect.

(a) **Plant Physics.**

A review of the gas laws and the properties of solutions; colloids; plant cell structure, permeability, and hydration; light and temperature relations; material and energy exchanges at root and leaf; transport of solutes.

(b) **Plant Chemistry.**

Essential elements; sources of supply, occurrence of functions in various parts of plant. Principal plant compounds; chemistry occurrence, theories as to function and synthesis. Special topics biochemistry of plant disease, cold resistance, drought resistance, alkali tolerance, etc.

Prerequisite: One or more senior courses in botany and chemistry.

Text-books: Philip, *Physical Chemistry*; Haas and Hill, *The Chemistry of Plant Products*.

129. **Seminar in Plant Biochemistry.** 1 hr.

Reports by students on the literature of selected topics, with class discussions. Required of all graduate students in plant biochemistry.

130. **Seminar in Plant Biochemistry.** 1 hr.

Continuation of course 129, for second year graduate students.

Graduate Courses.

Students with the necessary training may take work leading to the degree of M.Sc. Honours courses in Field Husbandry, related courses in other departments, and a research project in a field of work covered by the list of Field Husbandry courses may be selected in consultation with the student's adviser. Owing to limited accommodation for research, students desiring to register for such work should make arrangements well in advance.

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DEPARTMENT OF GEOLOGY

Professor Allan, Assistant Professor Warren, Dr. Rutherford

- 32. Introductory Geology.** 2 hrs. lect., first half.
3 hrs. lab., sec. half.

External agencies of erosion; internal dynamic agents; physiography of Canada; stratigraphic column; geological mapping.

Text-book: Coleman & Parks, *Elementary Geology* (Dent).

Pirsson and Schuchert, *Text-book of Geology Vol. I* (Wiley).

- 33.** (Same as 32 for 1924-25).

Open to students taking Honours in Botany and in Economics. (Lectures only).

Senior Courses.

- 51. General Geology.** 3 hrs. lect., 3 hrs. lab.

Processes of destruction and reconstruction; interpretation of physiographical features with map study; stratigraphic column with index fossils from each period; common minerals and rocks.

Text-book: Pirsson & Schuchert, *Text-book of Geology* (Wiley).

- 52. Petrology.** 3 hrs. lect., 3 hrs. lab.

Physical, chemical and optical properties of common rock-forming minerals; classification and genesis of sedimentary, igneous and metamorphic rocks. Examination of rock sections. The last six hours are given to structural geology.

Text-books: Pirsson, *Rocks and Rock Minerals* (Wiley); Johannsen, *Essentials for the Microscopical Determination of Rock-forming Minerals and Rocks*, (University of Chicago Press).

Reference: Leith, *Structural Geology* (Holt); Iddings, *Rock Minerals* (Wiley); Harker *Petrology for Students* (Cambridge University Press).

Prerequisite: Geology 32 or 51.

GEOLOGY

- 53. Mineralogy.** 3 hrs. lect., 3 hrs. lab.
 Principles of crystallography; physical and chemical properties of the metallic and non-metallic minerals; blow-pipe analysis. Introduction to petrography.
 Text-books: Dana's *Text-book of Mineralogy*, Third edition, W. E. Ford (Wiley); Lewis, *Determinative Mineralogy* (Wiley); Winchell, *Elements of Optical Mineralogy* (Wiley).
 Reference: Brush & Penfield, *Determinative Mineralogy and Blow-pipe Analyses* (Wiley); Johannsen, *Determination of Rock-forming Minerals* (Wiley).
 Prerequisite: Geology 51.
- 54. Mineralogy.** 3 hrs. lect., 3 hrs. lab., first half.
 3 hrs. lab., sec. half.
 Physical and chemical properties of metallic and non-metallic minerals including hydrocarbons; elements of crystallography; descriptive and determinative mineralogy; blow-pipe analysis.
 Text-books: Dana's *Text-book of Mineralogy*, Third edition W. E. Ford, (Wiley); Warren, *Manual of Determinative Mineralogy*, (McGraw-Hill); Brush and Penfield, *Determinative Mineralogy and Blow-pipe Analysis* (Wiley).
 Prerequisite: Geology 32. Geology 52 may be taken at the same time.
- 55. Stratigraphy.** 3 hrs. lect., 3 hrs. lab.
 Discussion of principles of stratigraphy; special consideration of stratigraphy of North America with index fossils from each of the periods; interpretation of geological maps.
 Text-books: Pirsson & Schuchert, *Text-book of Geology, Part II*, (Wiley); Grabau, *Comprehensive Geology* (Heath).
 Reference: Grabau, *Principles of Stratigraphy* (Heath); Geological Survey Reports, Journals, etc.
 Prerequisite: Geology 51.
- 56. Historical Geology.** 3 hrs. lect., 3 hrs. lab., sec. half.
 Text-book: Pirsson & Schuchert, *Text-book of Geology, Part II*, (Wiley).
 Reference: Geological Survey Reports, Journals, Pamphlets, etc. Taken with Geology 55, second half.

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- 57. Petrography.** 3 hrs. lab., first half.
Examination of thin sections of minerals and rocks.
Text-book: Johannsen, *Determination of Rock-forming Minerals* (Wiley).
- 58. Mineral Deposits.** 3 hrs. lect., first half.
3 hrs. lect., 3 hrs. lab., sec. half.
Classification, mode of occurrence and geological relations of various types of mineral deposits, including petroleum, natural gas and coal. Emphasis given to Alberta mineral deposits including clays.
Text-books: Ries, *Economic Geology* (Wiley); W. H. Emmons, *General Economic Geology* (McGraw-Hill); Ries, *Clays, Occurrence, Properties and Uses*.
Reference: Moore, *Coal* (Wiley); Lindgren, *Mineral Deposits* (McGraw-Hill); W. H. Emmons, *Geology of Petroleum* (McGraw-Hill).
- 62. Paleontology.** 3 hrs. lect., 3 hrs. lab.
Principles of classification; comparison with modern forms; representative fossils from each geological period; determination of type material.
Text-book: Shimer, *Introduction to the Study of Fossils* (Macmillan).
Reference: Zittel, *Text-book of Paleontology* (Macmillan); Geological reports, etc.
Prerequisite: Zoology 1, Geology 51.

Honours Courses.

Honours courses in Geology may be arranged at the beginning of the term with the head of the department, in two of the following subjects:

101. Canadian Geology.
102. Stratigraphical Geology.
103. Petrography.

DEPARTMENT OF HISTORY

Professor Burt and Associate Professor Long.

Junior Courses.

- 1. General History** 3 hrs.
Outlines of General History from the Renaissance to the present day.

HISTORY

Text-books: Hayes, *A Political and Social History of Modern Europe, Vol. I*; Robinson & Beard, *The Development of Modern Europe, Vol. II*; Robinson, *Readings in European History, Vol. II*.

2. British History 3 hrs.

From 1485 to the present day.

Text-books: Gardiner, *Student's History of England, Vols. II and III*; Ramsay Muir, *Philip's New Historical Atlas*.

Reference readings will be assigned during the course.

3. British History. 3 hrs.

From the beginning to 1485.

Text-books: Oman, *England before the Norman Conquest*; Davis, *England under the Normans and Angevins*; Vickers, *England in the Later Middle Ages*.

Reference readings will be assigned during the course.

Senior Courses.

53. European History. 3 hrs.

From the Barbarian Invasions to the fall of the Hohenstaufen.

Text-books: Emerton, *Introduction to the Middle Ages*; Emerton, *Mediaeval Europe*.

Not offered 1924-25.

54. European History. 3 hrs.

From the Renaissance to the end of the Wars of Religion.

Text-books: Symonds, *Short History of the Italian Renaissance*; Froude, *Life and Letters of Erasmus*; Lindsay, *History of the Reformation*; Harrison, *William the Silent*; Gardiner, *Thirty Years' War*; *Cambridge Modern History* (selected chapters).

Reference readings will be assigned during the course.

56. European History. 3 hrs.

From the congress of Vienna to the present day.

Text-books: Hazen, *Europe Since 1815*; Powers, *The Things Men Fight For*; Robinson and Beard, *Readings in Modern European History, Vol. II*.

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Reference books: Lichtenberger, *Germany and its Evolution in Modern Times*; Steed, *The Hapsburg Monarchy*; Fisher, *The Republican Tradition in Europe*; Cesaresco, *The Libetration of Italy*; Lowell, *Governments and Parties in Continental Europe*; *Cambridge Modern History* (selected chapters).

Other reference readings will be assigned during the course.

57. English Constitutional History. 3 hrs.

Text-books: Maitland, *Lectures on English Constitutional History*; Adams and Stephens, *Select Documents of English Constitutional History*; Dicey, *The Law of the Constitution*.

Reference readings will be assigned during the course.
(Not offered 1924-25).

58. Canadian History. 3 hrs.

Political and constitutional.

Text-books: Lucas, *New France*; Durham's Report; Kennedy, *The Constitution of Canada*.

Reference readings will be assigned during the course.

Honours and Graduate Courses.

101. English History. 3 hrs.

From the accession of James I to the Restoration.

Text-books: Montague, *History of England, 1603 to 1660* for the general outline; Gardiner, *History of England, 1603 to 1642*; *History of the Great Civil War*; *History of the Commonwealth and Protectorate*; Firth, *Last years of the Protectorate*; *House of Lords During the Civil War*; *Cromwell's Army*; *Cromwell: Hutton, Laud*; *Trail, Strafford*; Shaw, *A History of the English Church during the Civil Wars and under the Commonwealth*; Prothero, *Statutes and Constitutional Documents 1559-1625*; Gardiner, *Constitutional Documents of the Puritan Revolution, 1625-1660*; Carlyle, *Cromwell's Letters and Speeches*; Clarendon, *History of the Rebellion and Civil Wars in England*; Whitlocke's Memorials; Ludlow's Memorials; Pepys' Diary; *The Clarke Papers*.

AGRICULTURE

102. European History. 3 hrs.

From the outbreak of the French Revolution to the Congress of Vienna.

Textbooks: Madelin, *The French Revolution*, and Rose of Furnier, *Napoleon I*, for the general outline; De Tocqueville, *L'Ancien Régime*; Taine, *Les Origines de la France Contemporaine*; Sorel, *L'Europe et la Revolution Française*; Belloc, *Danton*; Mahan, *The Influence of Sea Power on the French Revolution and Empire*; Morse Stephens, *The French Revolution*; Acton, *Lectures on the French Revolution*; Vandal, *L'Avènement de Bonaparte*; Fisher, *Napoleonic Statesmanship*; Aulard, *Political History of the French Revolution*; *Etudes et Leçons*; *The Cambridge Modern History*; Lavissee et Rambaud, *Histoire Générale*; von Sybel, *Geschichte der Revolutionszeit*; Seeley, *The Life and Times of Stein*; Oman, *A History of the Peninsular War*. Houssaye, 1814, 1815.
Not offered 1924-1925.

DEPARTMENT OF HISTORY OF AGRICULTURE

Dean Howes.

Junior Courses.

1. History of Agriculture. 1 hr.

Study of ancient agriculture: South American, Grecian, Roman.

2. History of Agriculture. 1 hr.

Evolution of agriculture in England and in continental Europe.

Senior Courses.

51. History of Agriculture. 1 hr.

Study of the development of agriculture in America particularly in Canada.

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DEPARTMENT OF HORTICULTURE
Mr. Harcourt.

Junior Courses.

2. **Horticulture.** 3 hrs. lect.

Végétale Gardening.

The course is intended to cover a general knowledge of the more important vegetables, their soil and fertilizer requirements, cultural methods, harvesting and storing.

Text-book: *Vegetable Gardening*, Green.

Floriculture.

The growing of annual, biennial and perennial flowers for general garden purposes; the care and management of house plants; bulb culture.

Text-book: *Home Floriculture*, Rexford.

Farm Forestry.

A study of the leading forest trees with reference to their distribution and usefulness; the farm woodlot; the use of waste places.

Senior Courses.

51. **Horticulture.** 2 hrs. lect., 2 hrs. lab.

Propagation of Plants.

The propagation of plants by natural and artificial means; hot beds and cold frames.

Reference: *The Nursery Manual*, Bailey.

Fruit Gardening.

The course covers in a general way the planting, cultivating, pruning and propagating of fruits.

Text: *Farm Horticulture*, Hood. Bulletins, Reports.

Home Beautification.

The course provides instruction in the methods of beautifying the home surroundings; care of trees, shrubs, vines and flowers; the use of hedges and screens.

Reference: *Practical Landscape Gardening*, Cridland, Bulletins, Reports.

HORTICULTURE

52. Horticulture.

2 hrs. lect., 2 hrs. lab.

Vegetable Gardening.

A study of the leading varieties of vegetables; market gardens and truck farms; vegetable forcing; problems of seed culture; management; storage; marketing and canning; selection and breeding; judging vegetables.

Text-books: *Vegetable Growing*, Lloyd; *Vegetable Gardening*, Watts.

Floriculture.

Growing flowers for decorative and bedding purposes; construction of beds and borders; construction and management of greenhouses; breeding new varieties; growing seed.

References: *Greenhouse Management*, Taft; *Greenhouse Construction*, Wright; *Principles of Floriculture*, White.

Fruit Growing.

A study of the fundamental principles; a study of the work of breeding new and hardy varieties; breeding technique.

References: *Fundamental Principles of Fruit Growing*, Gardner, Bradford and Hooker; Bulletins, Reports.

Landscape Gardening.

General principles of laying out beds, borders, walks and drives; correct planting of flowers, shrubs, vines and trees; the prairie style of landscape gardening. References: *Landscape Gardening*, Waugh; *Landscape Gardening*, Maynard.

Forestry.

Care of forest tree seeds; propagating and growing shrubs and trees; a study of the protective influence of windbrakes, shelter belts and forests on stock, crops, fruits and homes; forest resources; forest protection.

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DEPARTMENT OF HOUSEHOLD ECONOMICS

Miss Patrick and Miss Deadman.

Junior Courses.

1. 4 hrs. sec. half.

Sewing.

Instruction in hand and machine sewing as applied to the making of simple garments.

2. 3 hrs. lect., 3 hrs. lab. first half.

Home Nursing.

Home care of the sick; emergencies; simple bandages.

Textiles.

The composition, physical properties and manufacture of fabrics; influence of these on selection and methods of cleansing.

3. 3 hrs. lect., 3 hrs. lab. sec. half.

Household Management.

Materials found in the home; principles involved in their care; the house, its equipment and furnishing. Labor-saving devices.

Foods.

An introduction to the study of foods and cookery.

31. 2 hrs. lect., 4 hrs. lab.

Experimental Cookery.

An experimental study of foods.

32. 2 hrs. lect., 2 hrs. lab. first half.

Textiles.

Fibres: Classification; physical and chemical structure; physical and chemical test for fibres.

Fabrics: Manufacture; adulterations; uses in the household; laundering of fabrics.

HOUSEHOLD ECONOMICS

33. **Household Management.**

2 hrs. lect., 2 hrs. lab. sec. half.

Materials found in the home; principles involved in their care; the house; its equipment and finishings; labor-saving devices.

Senior Courses.

51.

3 hrs. lect., 3 hrs. lab.

Foods.

A study of foods; laboratory practice in food preparation.

Home Nursing.

The care of the sick in the home.

Household Management.

The care of the house, furnishings and equipment; labor-saving devices.

52.

3 hrs. lect., 3 hrs. lab.

Economics of the Household.

The home as a business; the income and its expenditure; standards of living, budgets; household and personal accounts.

Foods.

Nutritive value and cost of foods; food for the family group; planning and preparation of meals; special diets.

55.

2 hrs. lect., 8 hrs. lab.

Foods.

Lectures and discussion.

Typical foods—production, manufacture, composition, value in the diet. Supplementary reading will be required and used as a basis for class discussion.

Laboratory work: An experimental study of foods; the principles of cookery.

Economics of the Household.

The home as a business; the income and its expenditure; standard of living, budgets; household and personal accounts.

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57. 2 hrs. lect., 3 hrs. lab.

Dietetics.

The principles of nutrition applied to the feeding of individuals and the family group under normal conditions. Diets for special cases.

58. 3 hrs. lab. sec. half.

Invalid Cookery.

An application of the principles of cookery to dishes for the sick and convalescent.

59. 3 hrs. first half.

Methods.

The problem of teaching. Household Economics; equipment, arrangement of courses; methods of presentation of subject matter; demonstrations.

DEPARTMENT OF MATERIA MEDICA

Assistant Professor Dunn.

Junior Courses.

1. **Official Drugs.** 4 hrs. lect.

Inorganic and organic.

3. **Official Drugs.** 1 hr. lect.

A selected group, both inorganic and organic. For Medical students.

4. 1 hr. lect., 3 hrs. lab.

A course for students in Dentistry, dealing with the source, physical properties, chemical constitution and properties, pharmacy and pharmacology of a selected list of important drugs of special significance to dental practitioners. It is co-ordinated and runs concurrently with a laboratory course in Pharmacology.

5. 1 hr. lect.

A special course for Nurses in training at the University Hospital.

MATHEMATICS

Senior Courses.

51. **Official Drugs.** 4 hrs. lect.

Inorganic and Organic.

52. **Official and Non-Official Drugs.**

A selected list of important non-official drugs and a more minute study of some important official drugs. Text-books: Bruce and Dilling, *Materia Medica and Therapeutics*; *British Pharmacopoeia*; American Medical Association, *New and Nonofficial Remedies* (Students in *Materia Medica* 52 only).

Supplementary: Greenish, *Materia Medica*; Squire's *Companion to the British Pharmacopoeia*; Culbreth, *Materia Medica and Pharmacology*; Martindale, *Extra Pharmacopoeia*.

DEPARTMENT OF MATHEMATICS

Professor Sheldon, Associate Professor Campbell, Mr. Cook,
Miss Dodd.

Junior Courses.

1. **General Elementary Mathematics.** 3 hrs.

Lectures on the fundamental principles and methods of algebra, geometry, trigonometry, and statistics; applications of mathematics in science, industry and art. Text-books: Whitehead, *Introduction to Mathematics* (Home Univ. Lib.); Young and Morgan, *Elementary Mathematical Analysis* (Macmillan); Godfrey and Siddons, *Elementary Algebra, Vol. II* (Cambridge). Required of first year students in Arts and Sciences, in Agriculture and in Architecture.

2. **General Elementary Mathematics.** 6 hrs.

Algebra, plane trigonometry and analytic geometry; solution of practical problems. Required of first year students in Engineering.

Text-book: Griffin, *Introduction to Mathematical Analysis* (Houghton, Mifflin).

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3.

3 hrs.

The advanced section of Mathematics 1; lectures on the most fundamental topics in Mathematics 1 and 7. For students who intend to begin specialization in scientific subjects in the second year.

Text-book: Griffin, *Introduction to Mathematical Analysis* (Houghton, Mifflin).

7. Algebra and Analytic Geometry.

3 hrs.

Elementary functions; analytic geometry.

Text-books; Wilczynski and Slaught, *College Algebra* (Allyn and Bacon); Griffin, *Introduction to Mathematical Analysis* (Houghton, Mifflin).

21. Elementary Mathematical Analysis.

6 hrs.

Power, polynomial, exponential, logarithmic and circular functions. Graphic algebra. Errors and approximations; slide rule; tables; theory of equations; infinite series; derivatives and anti-derivatives. Applications to plane and solid geometry and spherical trigonometry.

Text-books: Wilczynski and Slaught, *College Algebra* (Allyn and Bacon); Woods and Bailey, *Analytic Geometry and Calculus* (Ginn) Betz and Webb, *Solid Geometry* (Ginn); Murray, *Spherical Trigonometry* (Longmans). Required of second year students in Engineering and Architecture.

22. Elementary Mechanics.

3 hrs. lect., 2 hrs. lab.

Kinematics; vectors; Newton's laws, with applications to dynamics; impact, direct and oblique; work, energy, power, moments of forces; centres of gravity; dynamics of rotation and revolution; simple harmonic motion; machines; elasticity; hydrostatics and hydrodynamics, including Bernoulli's theorem.

25. and 26.

6 hrs.

Calculus.

Theory of limits and continuity; differentiation, with applications; differentials; inverse functions, hyperbolic functions, etc.; integration, with applications;

MATHEMATICS

improper definite integrals and Rolle's theorem, mean value theorems; indeterminate forms; Taylor's and McLaurin's theorems and series; curvature, involutes, evolutes; partial differentiation.

Text-book: Caunt, *Infinitesimal Calculus* (Oxford).

Mechanics.

Plane statics of rigid bodies; centres of rotation, theorem of the three centres; shearing forces and bending moments; virtual work; rectilinear and plane dynamics of a particle, equations of energy and momentum, simple harmonic motion; the potential energy criterion for equilibrium and stability; constrained motion; centres of gravity, Pappus' theorems, moments and products of inertia; plane dynamics of a rigid body, D'Alembert's Principle.

Text-book: Lamb, *Statics and Dynamics* (Cambridge).

32. Elementary Mathematics (Medicine). 3 hrs. first half.

Proportion, similitude; rate of growth; trigonometry; computation; graphical methods; theory of measurement, elementary statistics.

Text-book: Feldman, *Biomathematics* (Constable).

36. Elementary Mathematics (Pharmacy). 2 hrs. sec. half.

The arithmetic and algebra required in Pharmacy.

Advanced Courses.

Students in the Faculty of Arts and Sciences who intend to read for honours are required to take in the first year Mathematics 3 and in the second year Mathematics 55 and 22.

Senior Courses.

53. Astronomy. 3 hrs.

History of early astronomy, study of the earth; astronomical coordinates, time. The solar system, the stars, structure of the universe, origin of the solar system. Practical work; study of the constellations; discussion of articles in current journals.

Text-book: Moulton, *Introduction to Astronomy* (Macmillan).

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- 55. Calculus.** 3 hrs.
As in Mathematics 25, with additional topics.
- 56. Mechanics.** 3 hrs.
As in Mathematics 26, with additional topics.
- 57. Advanced Calculus.** 3 hrs.
A second course in the Calculus, including differential equations.
Text-book: E. B. Wilson, *Advanced Calculus* (Ginn).
- 58. Advanced Mechanics.** 3 hrs.
Dynamics of rigid bodies; celestial mechanics.
Not offered in 1924-25.
- 59. Advanced Calculus.** 3 hrs. first half.
For Electrical Engineering students.
Text-book: Caunt, *Calculus* (Oxford).
- 61. Theory of Finance.** 3 hrs.
Interest, annuities, amortization, valuation of bonds, sinking funds and depreciation, theory of probability, life assurance.
Text-book: Hart, *Mathematics of Investment* (Heath).
- 62. Statistics.** 3 hrs.
Use of statistics, collection of material and the history of statistics; frequency distributions and graphical representation of statistical results; averages; dispersion, correlation; statistical application of life tables.
Text-book: Jones, *A First Course in Statistics* (Bell).
Not offered in 1924-25.
- 63. Graphical and Numerical Methods (Engineering).**
2 hrs. lect., 3 hrs. lab. sec. half.
Application of graphical methods to algebra and calculus. Nomography. Introduction to the theory of probabilities and measurements.
Text-book: Lipka, *Graphical and Numerical Methods* (Wiley).

MEDICINE

64. **Vector Analysis.** 3 hrs.

Not offered in 1924-1925.

Honours Courses.

101. **Foundations of Mathematics.** 2 hrs.

102. **Theory of Functions.** 2 hrs.

Not offered in 1924-1925.

103. **Geometry.** 2 hrs.

Not offered in 1924-1925.

104. **Algebra.** 2 hrs.

Not offered in 1924-1925.

105. **Selected Topics.** 2 hrs.

DEPARTMENT OF MEDICINE AND CLINICAL MEDICINE

Professor Egerton Pope, Associate Professor Heber C. Jamieson, Assistant Professor H. Burton Logie, Lecturers: I. R. Bell, (Assistant Professor of Therapeutics), D. B. Leitch, C. W. Hurlburt, W. H. Scott. Instructors: A. F. Anderson, J. E. Carmichael, F. S. MacPherson.

51. **Medicine and Clinical Medicine.** 1 hr. lect., 9 hrs. clinic.

Lectures in theoretical medicine in medical building and clinics at university hospital. One lecture per week in systematic medicine. Lectures, clinics and demonstrations in the out-patient department and wards of the hospital. Surface markings, history taking and physical examination of patients.

52. **Medicine and Clinical Medicine.**

2 hrs. lect. 10½ hrs. clinic.

Lectures in theoretical medicine and clinics at university hospital. The instruction in this class will consist of a continuation of the lectures in systematic medicine once a week in the medical building and of

UNIVERSITY OF ALBERTA

bed-side teaching in the wards of the hospital. Special attention will be given to differential diagnosis of main symptoms during the term, and students will have an opportunity of observing the progress of cases and the effects of treatment.

53. **Medicine and Clinical Medicine.**

2 hrs. lect., 11 hrs. clinic.

During the final year, students will have the opportunity of acting as assistants to the internes of the hospital and will be expected to help in routine clinical laboratory work in the hospital, in writing histories and keeping up progress notes in careful detail, in routine ward-work, and in out-patient clinics. Special lectures will be given during the session in the more advanced principles of general internal medicine, cardiology, tuberculosis, neurology, and pediatrics. Opportunities will be offered for the study of contagious diseases and of mental diseases. Special bed-side lectures will be given in therapeutics to illustrate the principles and application of treatment of disease. A clinical and pathological conference will be held once a week during the session. In association with the department of physiology a short course on the application of physiological principles to medicine will be given.

Text-books: Medicine—Osler's *Practice of Medicine*; Taylor's *Practice of Medicine*.

Clinical Medicine—Rainey and Hutchinson, *Clinical Methods*; Rawling, *Surface Markings*; French, *Differential Diagnosis of Main Symptoms*; Purves Stewart, *Diagnosis of Nervous Diseases*.

51. **Therapeutics.** 1 hr. lect. and 6 2-hr. periods.

This is a lecture course with clinical demonstrations of methods of therapy.

52. **Therapeutics.** 2 hrs.

Clinical work in the hospital. Prescription writing—Anaesthetics, etc.

MINING ENGINEERING

DEPARTMENT OF MINING ENGINEERING

Professor Pitcher and Associate Professor Cameron.

The Department will endeavour to find employment for its students during the summer months in the mines of Alberta and British Columbia, thereby giving them opportunity to get the necessary practical experience in their chosen field. A student, before being granted his degree, must present a certificate or certificates showing that he has had at least 6 months' practical experience in coal, metal or shale mining (in or around a mine) or in geological field work, or such experience as shall be considered the equivalent of these.

All students are required to take the Mine Survey School.

All students, before graduation, must be able to show:

(a) a certificate of having passed a course in First Aid work, as prescribed by the Workmen's Compensation Board of the Province of Alberta;

(b) a certificate of having taken a course in Mine Rescue work as prescribed by the Workmen's Compensation Board of the Province of Alberta.

The Department does not require the student to purchase text-books for the various courses, but prescribes a list of references from which he is expected to do selected reading. Certain handbooks and standard text-books are recommended as desirable for constant reference and to form the nucleus of a reliable working library.

Three Options.—Coal Mining, Metal Mining and Mining Geology, are offered in the fifth year. The student is expected to decide at the end of his fourth year which course he desires to follow, and his work is laid out accordingly.

Senior Courses.

54. Fire Assaying. 1 hr. lect., 3 hrs. lab., first half.

Furnaces, balances and other apparatus; sampling and preparation of ores for assay; special methods of assay; assays for gold and silver.

Prerequisite: Chem. 1.

55. Prepared Fuels. 2 hrs. lect., first half.

Coke, by-products from coke; producer gas; powdered coal; colloidal coal; low-temperature distillation; coal briquettes; fuel oils.

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- 56. Principles of Mining.** 3 hrs. lect., first half.
Surface and underground prospecting, deep drilling; earth and rock excavation; drills and coal cutters; blasting rock and coal; development work and workings, shafts, drifts, entries; timbering; drainage; illumination.
- 58. Metallurgy.** 3 hrs. lect., 3 hrs. lab., sec. half.
Thermal analysis, equilibrium diagrams, binary alloys; refractory materials; metallurgical products; metallurgy of iron and steel, copper, lead and zinc. Prerequisite: Chemistry 55.
Required of students taking Metal Mining and Mining Geology.
- 59. Coal Mining.** 3 hrs. lect., sec. half.
Coal mine development, pit bottom, entries, pillars, room and pillar mining, longwall mining, flat seams, thick seams, multiple seams; illumination; preparation of coal for market, coal washing, examination, valuation and administration.
Required of students taking Coal Mining.
- 60. Metal Mining.** 3 hrs. lect., sec. half.
Alluvial mining, hydraulic mining, open cuts and quarrying, glory hole and milling, underhand and overhand stoping, open and timbered stopes, shrinkage stopes, filled stopes, caving methods; illumination and ventilation; mine examination, valuation and administration.
Required of students taking Metal Mining and Mining Geology.
- 61. Mining Machinery.** 3 hrs. lect., 3 hrs. lab., first half.
Head frames and tipples, bins; winding engines, drums, gravity planes, engine planes, hoisting and haulage, aerial tramways; pumps; power plant layout, etc., drafting room work on mine surface plant. Prerequisites: C.E. 57, C.E. 70.
Required of students taking Coal Mining and Metal mining.

MINING ENGINEERING

62. Ventilation. 1 hr. lect., sec. half.

Gases found in coal mines; natural and artificial ventilation, mine resistance, airways and control of air current, splits, brattices, doors, regulators; disc and centrifugal fans; mine fines and explosions; mine rescue.

Required of students taking Coal Mining and Metal Mining.

63. Concentrating Machinery. 2 hrs. lect., 3 hrs. lab., first half.

Specific gravity separations and concentrations; crushers; screens, classifiers, jigs, tables, vanners, etc.; amalgamation and cyanidation; flotation; electro-magnetic and other dry separators.

Required of all students in Mining.

64. Mine Design. 3 hrs. lab., sec. half.

Underground layout of a mine; general and detail drawings showing method of mining; timbering; shaft station or pit bottom; report on the mine with estimate of cost.

Concurrent with M.E. 59 and M.E. 60.

Prerequisite: M.E. 61.

Required of all students taking Coal Mining and Metal Mining.

65. Fuel, Oil, Water and Gas Analysis. 6 hrs. lab.

Laboratory work on analysis of fields, oils, boiler waters and flue gases.

Prerequisite: Chemistry 55.

Required of students taking Coal Mining.

66. Compressed Air Machinery. 2 hrs. lect., first half.

Compressors, distribution, reheating, receivers, hoists, pumps, air engines.

Prerequisite: C.E. 57.

Required of students taking Coal Mining.

UNIVERSITY OF ALBERTA

67. Mine Survey School.

An extended trip to visit local and other mining districts of the province and adjacent mining areas of British Columbia is made by the fourth and fifth years during the first two weeks of May. Detailed reports on all mines visited are required from each student. A number of days are spent on practical underground surveying, and a closed survey of at least ten sights made. Field notes of the survey and plotted map are required of each student. Members of the Geology Department of the University accompany the survey school and the areal geology of each district will be studied under their supervision.

Graduate Courses.

Courses for degree of Master of Science may be arranged in conference with the head of the department.

DEPARTMENT OF MODERN LANGUAGES

Professor Kerr, Professor Coar, Associate Professor Sonet,
Assistant Professor Pelluet, Assistant Professor Owen
Mr. de Savoye.

Students entering the University deficient in the languages and who in their first year are taking the A courses may be permitted if they pass with second class standing (that is, 65 per cent.), to read the authors of the First Year course during the summer and write these off at the time of the supplemental examinations in September. No credit will be granted until the second year work in the language concerned has been successfully completed.

Students intending to apply for the privilege referred to above (for which a special fee of five dollars is charged) should notify the Registrar's office not later than May 15th.

French

*A. Introductory French.

3-5 hrs.

Forms, elementary syntax; oral work; easy prose authors; prose composition.

FRENCH

Text-books: Kerr and Sonet, *French Grammar*; Aldrich and Foster, *French Reader*; Labiche, *Voyage de Monsieur Perrichon*.

Junior Courses.

1—3. Authors.

3 hrs.

Modern French stories such as: Erckmann-Chatrian, *Histoire d'un Conscrit de 1813*; L'Abbé Constantin; About, *Le Roi des Montagnes*.

NOTE.—Students who obtain credit for an "A" course may remove their matriculation condition or deficiency in the language taken

1. By enrolling in the sequent or first year's course and obtaining credit for this course. In this case they should read certain prescribed authors during the intervening summer.
2. By writing off the reading prescribed as above at the time of the Supplemental Examinations in September.

Composition and Conversation.

Text-books: Kerr and Sonet, *French Grammar, Part II*.

Dictation, composition and oral work based on the authors read.

Prerequisite: Matriculation French or French A.

5—4. Authors.

3 hrs.

Modern French stories such as: Mérimée, *Colomba*; Hugo, *Les Misérables*; Maupassant, *Contés*; Coppée, *Pour la Couronne*.

Composition and Conversation.

Text-book: Vreeland and Koren, *French Composition* (Holt).

Oral work and dictation based on the authors read.

Prerequisite: Grade XII French or French 1—3.

43. Scientific French.

3 hrs.

Introduction to the reading of scientific texts, selected with a view to the needs of students in Applied Science; colloquial practice: Kerr and Sonet, *French Grammar*.

Prerequisite: Matriculation French or French A.

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45. Scientific French.

2 hrs.

Introduction to the reading of scientific texts, selected with a view to the needs of students in Medicine. Colloquial practice: Kerr and Sonet, *French Grammar*. Prerequisite: As a minimum, matriculation French or French A.

Senior Courses.

51. (a) Eighteenth Century.

3 hrs.

Montesquieu, *De l'esprit des lois*; Le Sage, *Turcaret*; Marivaux, *Comédies*; Voltaire, *Lettres philosophiques*; *Candide*, *L'ingénue* and other selections; *Théâtre*; Rousseau, *La Nouvelle Héloïse*, *Le Contrat Social*; Diderot, *Extracts*; *The Encyclopaedists*; Beaumarchais, *Théâtre*.

(b) Composition and Oral Work.

Text-books: Goodridge, *French Composition*; Mansion, *Histoire de la Littérature Française*.

52. (a) Nineteenth Century Literature.

Chateaubriand, *Extraits*; Balzac, *Eugenie Grandet*; Hugo, *Hernani*; Renan, *Souvenirs d'Enfance et de Jeunesse*; Taine, *Les Origines de la France Contemporaine*; Alfred de Musset, *Les Confessions d'un Enfant du Siècle*, *Poesies choisies*; Flaubert, *Madame Bovary*; Augier, *Le Gendre de M. Poirier*; Selections from Maupassant and Zola; a study of the Parnassiens; Berthon, *Specimens of French Verse*.

(b) Composition and Oral Work.

Text-books: Goodridge, *French Composition*; Mansion, *Histoire de la Littérature Française*.
Not offered in 1924-1925.

54. (a) French Literature in the XVII Century.

3 hrs.

Introduction to the literature and thought of the Golden Age; selections from the works of the following authors: Molière, Corneille, Racine,

GERMAN

Descartes, Pascal, Larochevoucauld, Madame de Lafayette, Madame de Sévigné, La Fontaine, Bossuet, La Bruyère.

(b) Composition and Oral Work.

Text-books: Spiers, *Graduated Course of Translation into French Prose*; Mansion, *Histoire de la Littérature Française*.

Not offered in 1924-1925.

55. (a) French Canadian Literature. 3 hrs.

Origins and development.

Selected works of de Caspé, Gérin-Lajoie, Crémazie, Fréchette, Chauveau, Marmette, Le May, Chapman, Choquette, Laure Conan, Lozeau.

(b) Composition and Oral Work.

Text-books: Spiers, *Graduated Course of Translation into French Prose*.

Honours Courses.

101. Romanic Philology. 1 hr.

Introduction to historical phonology; reading of Old French texts.

Prerequisite: Two of the following courses: 51, 52, 54, 55.

102. French Literature. 2 hrs.

Study in a special field, discussion, reports, theses.

Prerequisite: Two of the following courses: 51, 52, 54, 55.

German

*A. Introductory German. 4-5 hrs.

This course will cover the common inflections and the elementary rules of syntax. It aims to give students a reading knowledge of easy German. Oral work and composition based on the authors.

UNIVERSITY OF ALBERTA

Junior Courses.

- 1-3. Authors. 3 hrs.**

Composition.

Review of German A. Supplementary study of grammatical and syntactical forms. Dictation, composition and oral work based on the authors read.

Prerequisite: Matriculation German or Course A.

*See footnote under French A above.

- 2-4. Authors. 2 hrs.**

Modern German short stories with some reference to their stylistic qualities. Oral work.

Composition.

Special problems of Grammar and Syntax. Formation of words, etc. Oral work. Composition based on the authors read.

Prerequisite: Grade XII or Course 1-3.

- 43. Scientific German. 3 hrs.**

Introduction to the reading of scientific texts, selected with a view to the needs of students in Applied Science; colloquial practice.

Prerequisite: Matriculation German or German A.

- 45. Scientific German. 2 hrs.**

Introduction to the reading of scientific texts to be selected with a view to the needs of students in Medicine; colloquial practice.

Prerequisite: As a minimum, Matriculation German or German A.

Senior Courses.

- 51. 3 hrs.**

German life and literature in the nineteenth century prior to the formation of the Empire.

Text-books: Coar's *German Literature in the Nineteenth Century*. Romanticism, Jung Deutschland, Realism, Sentimentalism.

Prerequisite: Course 2-4.

GERMAN

52. 3 hrs.

German life and literature in the eighteenth century prior to Goethe and Schiller. Special reference to the influence of English and Romanic literatures. Klopstock, Anacreontics, Lessing, Wieland, Herder.

Prerequisite: Course 2—4.

Not offered 1924-1925.

53. 3 hrs.

German life and literature in the nineteenth century since the formation of the Empire. Nationalism, naturalism, symbolism.

Text-book: Coar's *German Literature in the Nineteenth Century*.

Prerequisite: Course 51 or 52.

54. 3 hrs.

German life and literature from the French Revolution to the Napoleonic wars. Classicism, Goethe and Schiller; Romanticism, Fichte.

Prerequisite: Course 51, or 52, or 53.

Not offered 1924-1925.

Honours Courses.

101. **Germanic Philology.** 1 hr.

Middle High German, Historical Grammar; Paul's *Mittelhochdeutsche Grammatik*.

Prerequisite: Two of the following courses: 51, 52, 53, 54.

102. **German Literature.** 2 hrs.

Study in a special field. Discussions, reports, thesis.

Prerequisite: Two of the following courses: 51, 52, 53, 54.

Graduate Courses.

Graduate students desiring courses in German should consult the head of the department.

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Comparative Literature

51. Comparative Literature. 3 hrs.

A comparative study of the masterpieces of continental European literature from the fall of the Roman Empire to the rise of the Napoleonic Empire.

The purpose of the course is to trace the evolution of modern European culture in the interplay of literary ideals and forms. The course is intended more especially for those senior students who are not prepared to read the masterpieces of French, German, Italian and Spanish literature in the originals. These will be read and analyzed in English renderings and will include the following: The *Chanson de Roland*, The *Nibelungenlied*, *Edda* (selection); Dante, *Divina Commedia* (selections); Cervantes, *Don Quixote*; Calderon, *La Vida es Sueno*; Racine, *Iphigénie*; Molière, *Tartuffe*, *Le Misanthrope*; Corneille, *Le Cid*; Selections from: Montaigne, Rousseau, Voltaire, Diderot; Lessing, *Nathan der Weise*; Schiller, *Wallenstein*; Goethe, *Faust*.

**DEPARTMENT OF OBSTETRICS AND
GYNAECOLOGY**

Professor: L. C. Conn. Associate Professor of Gynaecology:
J. D. Harrison. Lecturer in Obstetrics: J. O. Baker.
Instructor in Obstetrics: C. U. Holmes.

51. Obstetrics and Gynaecology. 1 hr lect., 3 hrs. clinic.

This course will be given to fifth year Medical students and will consist of preliminary instruction including lectures (illustrated) demonstrations and clinical instruction in the hospital.

52. Obstetrics and Gynaecology. 1 hr. lec., 5 hrs. clinic.

Practical clinical work in the wards of the hospital. Theatre clinics and ward clinics. Individual instruction in the management of labour and care of the puerperal patient. Out-patient work and a short course of clinical lectures at the hospital.

PHARMACY

DEPARTMENT OF PATHOLOGY

Professor Ower, Dr. Vango, Dr. Hall and Dr. MacKay.

- 51. General Pathology.** 4 hrs. lect., 2 hrs. lab., first half.
2 hrs. lect., 4 hrs. lab., sec. half.

A series of lectures on General Pathology.
Laboratory instruction in Pathologic Histology.

- 52. Clinical Microscopy.** 2 hrs. lab., first half.

Routine microscopic examination for diagnosis of urine, sputum, blood, stomach contents, faeces, cerebro-spinal fluid, exudates.

- 53. Special Pathology.** 2 hrs. lect., 4 hrs. lab., session.

A series of lectures on the pathological changes in the special organs and tissues with concurrent laboratory demonstrations of gross and microscopic pathological material. Attendance at autopsies.

- 54. Clinico-Pathological Conference.** 2 hrs., session.

Demonstration of current pathological material in conjunction with clinical departments.

- 51. Medical Jurisprudence.** 1 hr. lect., half session.

A lecture course dealing with the criminal and civic aspect of legal medicine. Post mortem appearances will be illustrated by specimens, etc.

- 51. Toxicology.** 1 hr. lect., half session.

Following Medical Jurisprudence, a lecture course dealing with the modes and action of poisons. Classification of poisons. Post mortem appearances will be illustrated by specimens, etc.

DEPARTMENT OF PHARMACY

Assistant Professor Dunn and Mr. A. W. Matthews.

Junior Courses.

- 1. General and Galenical Pharmacy.** 3 hrs. lect.

History and literature; metrology; operation and appliances; preparations, plant constituents.

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2. **Prescriptions and Dispensing.** 1 hr. lect.
3. (a) **Prescriptions and Dispensing** (for students in Medicine). 1 hr., first half.
(b) **Practical Pharmacy** (for students in Medicine). 1 hr., sec. half.
4. **Practical Pharmacy.** 6 hrs. lab.
Concurrent with Pharmacy 1 and 2; general technique; the manufacture of galenicals; typical alkaloidal extractions and assays; dispensing of prescriptions.
5. **Drugs and Solutions.** 1 hr. lect.
An elementary course in Pharmacy for nurses in training at the hospital.

Senior Courses.

51. **General and Galenical.** 3 hrs. lect.
52. **Prescriptions and Dispensing.** 1 hr. lect.
54. **Practical Pharmacy.** 6 hrs. lab.
55. **Advanced Practical Pharmacy.** 6 hrs. lab.
Chemical methods of identification; determination of purity; analysis and synthesis of medicinal substances. Text-books: British Pharmacopoeia, London College, *Essentials of Pharmacy*; Heebner's *Synopsis*.
Supplementary: Ruddiman's *Incompatibles in Prescriptions*; Arny's *Principles of Pharmacy*; Lucas' *Practical Pharmacy*; Scoville's *The Art of Compounding*; Martindale's *Extra Pharmacopoeia*; Squire's *Companion to the B.P.*

DEPARTMENT OF PHILOSOPHY

Professor MacEachran, Assistant Professors Macdonald and MacPhee, Mr. Laycock.

Junior Courses.

1. **Psychology and Logic.** 3 hrs.
An introduction to general and experimental psychology and logic. This course is intended to serve as

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an introduction to advanced psychology and to education. It will involve the following:

- (a) A study of the evolution of consciousness in relation to the evolution of the nervous system.
- (b) An analysis of sensation, perception, imagination, memory, the instincts, the emotions, the sentiments, the unconscious, volition, reasoning, etc.
- (c) The application of psychological and logical methods to the study of the learning processes.

Not offered 1924-1925.

2. Introduction to General and Social Psychology. 3 hrs.

The course will include: (a) a general study of the nervous system; (b) a study of the principal phenomena of mental development and an analysis of the special mental functions, sensation, perception, imagination, memory, etc.; (c) the study of the instincts, innate tendencies, emotions, sentiments, etc.; (d) the principal phenomena of collective behaviour; (e) the origin of language, the myth, custom, morality, law and religion.

Philosophy

Senior Courses.

51. History of Philosophy. 3 hrs.

The history of thought from the ancients to the present time. In this course special attention will be given to those philosophical and scientific theories which have been most closely related to social, ethical and educational problems.

52. English Philosophy. 3 hrs.

Modern and Contemporary English Philosophy.
Not offered 1924-1925.

53. Contemporary Philosophy. 3 hrs.

A study of recent tendencies in Naturalism, Idealism, Pragmatism, Pluralism, Realism and Evolutionism.

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54. Ethics and Social Morality. 3 hrs.

A study of the historical development of moral standards in relation to social and economic conditions. This course is intended to familiarize the student with the main aspects of ethical history and theory.
Not offered 1924-1925.

55. Philosophy and Evolution. 3 hrs.

- (1) An historical study of the theories of evolution.
- (2) The relation of evolution to psychology, social anthropology, ethics and education.
- (3) Evolution in relation to Vitalism and Idealism.
- (4) Contemporary speculative theories of evolution, e.g., Creative Evolution, Emergent Evolution, Evolutionary Naturalism.

Prerequisites: Beginning with the session 1925-26, Philosophy 51 will be a prerequisite to Philosophy 53.

Honours Courses.

Candidates for honours will take Course 51 and any other two of the courses noted above, but additional reading and essays will be required. In addition, specialized work will be required in one of the following:

101. Greek Philosophy.

102. Modern Philosophy.

103—107.

One of the following: Logic, Ethics, Aesthetics, Metaphysics, the Philosophy of Religion.

108. History of Philosophical and Scientific Thought.

Advanced course.

Not offered 1924-1925.

Graduate Courses.

Candidates for the degree of M.A. may pursue any of the above Senior or Honours Courses not already taken

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in their undergraduate work. In Philosophy 102 candidates doing their major work in Modern Languages may specialize in either Modern French Philosophy or Modern German Philosophy.

Psychology.

Senior Courses.

51. General and Experimental Psychology. 3 hrs.

The course will involve: (a) a brief history of Psychology. The historical outline will aim at furnishing a basis for the understanding of the principal present-day movements in Psychology. (b) A brief study of the general principles of mental development in their relation to the development of the nervous system. (c) Application of experimental methods to the study of sensation, perception, imagination, memory, etc. (d) The experimental investigation of the learning process.

52. Social Psychology and Social Anthropology. 3 hrs.

The course will include: (a) a detailed study of social influences in their relation to the development of personality; (b) a critical study of anthropological data regarding the origin of language, myth, custom, morality, law, art and religion.

54. Industrial Psychology. 3 hrs.

A study of the facts of normal and abnormal psychology and their application to the problems of industry. Some of the subjects to be discussed are: instincts in industry; the causes, nature and significance of individual differences; the influence of environmental factors on efficiency; work, fatigue and mental hygiene; the vocational selection of employees, with a study of the history, theory and practice of mental measurements; the psychology of scientific management; advertising and salesmanship.

55. Educational Psychology. 3 hrs.

Consists of lectures, discussions and experimental work. A thorough study is made of: (a) the learning process with particular attention to classroom proce-

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dures; (b) individual differences, their causes, extent and methods of measurement; students will be trained in making individual and group psychometric investigations; (c) the psychology of the common branches together with a study of the more important educational tests and scales; (d) elementary statistics.

56. Legal Psychology.

3 hrs.

A study of normal and abnormal mental processes in relation to problems of judicial procedure. Some of the special problems to be discussed are: motivation of crime; the psychology of evidence, with special attention to the sources of incorrect testimony; psychological agents of use in the discovery of guilt; mental deficiency and insanity, and their relation to legal responsibility; individualization of punishment; prevention and correction of crime. Principles will be illustrated by case and statistical studies. (Open to students in Faculty of Law or in combined Arts and Law.)

Medical Psychology

These courses are designed solely for students in the Faculty of Medicine.

60. Introduction to Normal and Abnormal Psychology.

2 hrs. sec. half fourth year.

A study of normal and abnormal behaviour of the human mind; innate forms of behaviour, their modification by cognitive, affective and conative experiences, acquired forms of behaviour and the abnormalities which arise in each field.

61. Psychopathology.

1 hr. fifth year.

The mental factors at work in the causation and treatment of psychological disorders. A critical study is made of the theories of the "unconscious", and of the mechanisms involved. Methods of mental therapy. Case studies.

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62. Psychopathology. 1 hr. sixth year.

This course includes a study of insanity and mental deficiency.

- (a) A description of major types of psychoses; their aetiology and symptomatology. Case studies.
- (b) Aetiology and diagnosis of mental deficiency. Training in psycho metric investigations.

Prerequisites: Beginning with the session 1925-26, Philosophy 1 or 2 will be a prerequisite to Psychology 51 and Psychology 52.

It is desirable that students who intend to proceed to Psychology 54 and Psychology 56 take Philosophy 1 or 2 in the second year.

Honours Courses.

Candidates for honours will take courses 51 and 52 and any one of the other four general courses, but additional reading, essays and laboratory work will be prescribed. In addition specialized work will be required in one of the following:

101. Physiological Psychology. 3 hrs.

102. Abnormal Psychology. 3 hrs.

103. The Psychology of Religion. 3 hrs.

104. General and Experimental Psychology, Advanced Course. 3 hrs.

This course will involve a more advanced study of the facts of mental development. Present-day movements in Psychology will be examined and attention will be paid to current discussions. Experimental methods will be applied to the study of special problems. This part of the course will aim, generally, at a thorough training in the technique of psychological experiment. Prerequisite: Psychology 51.

105. Educational Psychology, Advanced Course. 3 hrs.
Consists of lectures, discussions and experimental work. The following topics indicate the scope of the

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course: (a) The psychology of special school subjects; (b) the theory of educational measurement, the principles of objective measurement, critical study of tests, test construction; (c) mental deficiency; (d) special abilities and disabilities; (e) diagnostic and corrective measures in special school subjects; (f) mental and educational surveys, and their use in classification, promotion, educational guidance.

Prerequisites: Psychology 51 and Psychology 55.

Not offered 1924-1925.

Graduate Courses.

Candidates for the M.A. degree may elect any of the above senior or honours courses not already taken as undergraduate work.

Education

53. Modern Educational Systems and Problems. 3 hrs.

A comparative study of systems of educational organization and administration in some of the leading countries of the world. Some of the specific problems to be discussed from this point of view are: Devolution of authority; aims and objectives of education; types of schools; curricula; teacher-training; classification and promotion of pupils; methods of supervision; educational finance; educational hygiene. An endeavor is made to familiarize the student with current tendencies in educational theory and practice. This knowledge is applied to the solution of some of Canada's educational problems.

54. History and Philosophy of Education. 3 hrs.

An examination of the philosophic basis and meaning of education will be approached through a critical study of the great educational writers. The historical study will aim to throw light on the following topics:

- (a) The end of education; different historical versions of the end; proximate ends; the ultimate end.
- (b) The philosophic significance of the human values (Science, Art, Morality, etc.).

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- (c) The process of education:
- (1) Logical and psychological aspects.
 - (2) Educative institutions: the school, the church, the family, voluntary associations, e.g., economic, professional, trade, cultural.

DEPARTMENT OF PHYSICS

Professor Boyle, Associate Professor Smith, Assistant Professor Lang, Mr. Nichols and Mr. Taylor.

Junior Courses.

1. General Elementary Physics. 3 hrs. lect., 2 hrs. lab.

Including the more important principles of mechanics, properties of matter, heat, sound, light, magnetism, and electricity. Illustrated by experiments.

For first year Arts and Sciences, Household Economics.

Text-book: Kimball's *College Physics*.

11. General Elementary Physics. 3 hrs. lect., 2 hrs. lab.

The same range as in Course 1, but with special emphasis on the medical aspects of the subject.

For students of first year Medicine, Dentistry and Pharmacy.

3. (a) Properties of Matter, Molecular Mechanics, and Heat. 3 hrs. lect., 2 hrs. lab., first half.

(b) Sound and Light.

3 hrs. lect., 2 hrs. lab., sec. half.

Illustrated by experiments.

For second year Engineering students, and certain second year, or well prepared first year students of Arts and Sciences.

Text-books: Duncan & Starling, *Text-book of Physics*; Allan & Moore, *Text-book of Practical Physics*.

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6. **Magnetism and Electricity.** 3 hrs. lect., 2 hrs. lab.

A course prerequisite to more advanced courses in electrical physics and in electrical engineering. Illustrated by experiments. For third year Engineering students and second year students of Arts and Sciences who have passed Physics 1 or its equivalent.

Text-books: Brooks & Poyzer, *Magnetism and Electricity*; Allan & Moore, *Text-book of Practical Physics*.

8. **General Physics.** 3 hrs. lect., 2 hrs. lab.

Phenomena of Physics explicable on the Molecular Theory; elementary modern electrical aspects of Molecular Theory in Physics and in Chemistry. Illustrated by experiments.

Introductory to the work of senior and honours classes. For second year students of Arts and Sciences who have passed Physics 1 or its equivalent.

Reference books: *Molecular Physics*, Crowther.

12. **Optics and Radiation.** 3 hrs. lect., 2 hrs. lab.

More advanced than the same subjects in Courses 1 and 3 (b), and introductory to the work of senior and honours classes. Illustrated by experiments. For second year students of Arts and Sciences who have passed Physics 1 or its equivalent.

Text-book: Edser's *Light for Students*.

Senior Courses.

Physics 6, 8 and 12 may be taken as ordinary senior courses, but not for honours or for specialists' certificates in Physics.

51. **Physical Optics.** 3 hrs. lect., 3 hrs. lab.

A course on Wave Theory, dealing especially with interference, diffraction, polarisation, double refraction, spectroscopy, the Zeeman Effect, and the elements of the special theory of Relativity.

Reference books: Houston, *Treatise on Light*; Preston, *Theory of Light*; Wood, *Physical Optics*.

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53. Electrical Physics. 2 hrs. lect., 3 hrs. lab.

Of direct and alternating current circuits, electrical and magnetic testing, precision electrical measurements, electric units and their dimensions.

Text-book: Starling, *Electricity and Magnetism*.

54. Introduction to the Electron Theory. 3 hrs. lect., 3 hrs. lab.

This course deals with the following topics: sparking potential, passage of electricity through gases, cathode rays, X-rays, photo-electricity, thermions, radioactivity, electromagnetic mass, positive ray analysis, isotopes, elementary views of atomic structure.

For senior students in Arts and Sciences.

Text-book: *Ions Electrons and Ionising Radiations*, Crowther.

Reference books: *The Electron*, Millikan; *Electricity in Gases*, Townsend; *Ionisation of Gases by Collisions*, Townsend; *X-rays and Crystal Structure*, Bragg; *Radioactivity*, Rutherford; *Studies in Radioactivity*, Bragg; *Photo-electricity*, Hughes; *X-Rays*, Kaye; *Ray of Positive Electricity*, Thomson; *Isotopes*, Aston.

55. Elements of Electron Theory. 3 hrs. lect., 3 hrs. lab., first half.

A course on modern electrical theory emphasising especially the nature and properties of ions in gases, ionisation by collision, sparking potentials, corona discharge, electrical conductivity of metals, and thermionic emission.

For fifth year students in Electrical Engineering.

Text-book: *Ions Electrons, Ionising Radiations*, Crowther.

57. Introduction to Mathematical Physics. 3 hrs. lect.

Theory of attraction and potential as applied to gravitation, magnetism and electrostatics; elements of hydrodynamics; Fourier's Series; the conduction of heat; wave theory; and the elements of theoretical thermodynamics.

Text-book: *Introduction to Mathematical Physics*, Houston.

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Reference books: *Newtonian Potential Function*, Pierce; *Mathematical Theory of Heat Conduction*, Ingersoll and Zobel; *Theory of Heat*, Preston; *Electricity and Magnetism*, Jeans.

Honours Courses.

Honours courses may be chosen from the senior courses by arrangement with the department.

101. Modern Atomic Physics Theory.

3 hrs. lect., 6 hrs. lab.

DEPARTMENT OF PHYSIOLOGY AND PHARMACOLOGY

Professor Downs, Assistant Professor Eddy, Dr. Bell, and Dr. Smith.

Physiology

The courses given in this department comprise lectures, laboratory work, demonstrations and conferences.

Junior Course.

1.

3 hrs. lect., 3 hrs. lab.

The physiological phenomena of the blood, circulation, digestion, absorption, assimilation, excretion, respiration and animal heat are studied in detail.

Senior Courses.

51.

3 hrs. lect., 3 hrs. lab.

The study of secretion (external and internal), muscle, nerve, the central nervous system, special senses and heredity constitutes the senior course.

53.

1 hr. Clinic, first half.

A clinical course in physiology to be given in conjunction with Clinical Medicine of the sixth year.

PHYSIOLOGY AND PHARMACOLOGY

55. 3 hrs. lect., first half.

A lecture course on the central nervous system for dental students.

61. 3 hrs. lect., 3 hrs. lab.

The same as Physiology 1. A senior subject open to students in Arts and Sciences.

Prerequisites: Chemistry 1 and Chemistry 52.

Text-books for all courses: Flack and Hill, Burton-Opitz, Stewart, Halliburton, Howell.

Reference books: Luciani, *Human Physiology*; Macleod, *Physiology and Biochemistry in Modern Medicine*; Wiggers, *The Circulation in Health and Disease*; Sherrington, *The Integrative Action of the Nervous System*; Gaskell, *The Involuntary Nervous System*; Starling, *Human Physiology*.

Pharmacology

Junior Course.

1. 3 hrs. lab.

A practical course in pharmacology for dental students. This course is coordinated with and runs concurrently with Materia Medica 4, a lecture course on materia medica and pharmacy for dental students.

Senior Course.

51. 2 hrs. lect., 3 hrs. lab.

This course consists of a systematic series of lectures and demonstrations on the physiological action of drugs, together with coordinated practical work in the laboratory during which the student observes and records the action of the important drugs.

Text-books: Sollman, Jackson, Bastedo.

Reference book: Cushny, *Pharmacology and Therapeutics*.

Research

The laboratory is always open to those who are qualified to undertake investigations in the domain of physiology and pharmacology. For particulars apply to the head of the department.

UNIVERSITY OF ALBERTA

DEPARTMENT OF POLITICAL ECONOMY

Professor MacGibbon, Mr. Drummond and Mr. Patton.

Junior Courses.

1. Principles of Economics. 3 hrs.

A general introduction to the study of Political Economy. In this course there will be two lectures a week and the class will be divided into quiz groups for the third hour.

Text-books: Gide, *Political Economy*; Smart, *An Introduction to the Theory of Value*. Assigned readings.

2. Elements of Political Economy. 2 hrs., first half.

A brief introductory course open only to students registered in the Faculty of Agriculture.

Text-book: Carver, *Principles of Political Economy*.

10. Economic Geography. 3 hrs., sec. half.

A study of production and trade as influenced by geographic conditions. The geography of the more important commercial products; continental and oceanic trade routes; great commercial centres.

Text-books: Smith, *Commercial and Industrial Geography*; Finch & Baker, *Geography of World's Agriculture*.

Senior Courses.

62. Elements of Political Economy. 2 hrs., first half.

Same subject matter as P.E. 2. Open only to students in Applied Science and Law.

63. Political Science. 3 hrs.

The origin, function, and organization of the state. Relation of law to social progress. Composition and function of modern political parties and other electoral groups.

POLITICAL ECONOMY

64. Trade and Transportation. 3 hrs.

International trade, economic protectionism, international commercial policies, tariffs, transportation as a factor in international trade.

Prerequisite: Courses 1, 2, or 62.

Not offered 1924-1925.

65. Labor and Industrial Problems. 3 hrs.

The genesis of labor problems, the wage system, labor legislation, unemployment, agencies of industrial peace, scientific management, unionism, syndicalism.

Prerequisite: Courses 1, 2, or 62.

Not offered 1924-1925.

66. Currency, Banking and Finance. 3 hrs.

The principles of money, monetary systems, commercial and investment banking, corporation finance.

67. Public Finance and Taxation. 3 hrs.

Public expenditures, budgets and budgetary legislation, public domains and public industries, taxation, public credit, provincial and local taxation.

68. Problems in Labor Management. 2 hrs., sec. half.

Labor maintenance, scientific management, welfare institutions, strikes, methods of industrial peace, labor legislation, unionism.

Prerequisite: Course 62.

69. Corporation Finance. 2 hrs., sec. half.

The nature of corporations, their promotion, capitalization, financing, reorganization; holding companies; franchises; the taxation of corporations, business law.

Prerequisite: Course 1, 2, or 62.

Not offered 1924-1925.

70. An Introduction to Agricultural Economics. 2 hrs., sec. half.

Land tenure; labor and machinery; farm capital and agricultural credit; price determination of agricul-

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tural products; marketing mechanism and organization; co-operation in agriculture; transportation, tariffs, taxation and insurance.

Prerequisite: Course 2.

71. Municipal Finance and Taxation. 3 hrs., first half.

A study of municipal finance, including public utilities, franchise agreements, taxation.

Prerequisite: Course 62.

72. Agricultural Marketing. 2 hrs.

Economic basis of marketing and price determination; assembling, grading, standardizing, processing, storing of farm products, financing crop movements; speculation; transportation routes and rates; co-operative marketing and pools; government authority in relation to marketing.

Prerequisite: Course 70.

73. Principles of Marketing. 3 hrs., sec. half.

Functions and mechanisms of marketing; primary markets, manufacturers, wholesale and retail agencies; organization and financing of export trade; co-operative marketing; price determination and policy.

Not offered 1924-1925.

Honours Courses.

101. History of Economic Theory. 3 hrs.

From the Mercantilists to the end of the 19th century.
Not offered 1924-1925.

102. Modern Economic Theories. 3 hrs.

A critical examination of modern economic thought.

120.—130.

Special graduate courses which may be arranged in consultation with the head of the department.

SOILS

DEPARTMENT OF SOILS

Professor Wyatt, Associate Professor Newton.

Junior Courses.

1. Soil Physics and Management.

2 hrs. lect., 4 hrs. lab., first half.

For B.S.A. students. Similar to Soils 51.

2. Soil Fertility and Fertilizers.

2 hrs. lect., 4 hrs. lab., sec. half.

For B.S.A. students. Similar to 52, but occupying only three-fourths as much time.

Senior Courses.

51. Soil Physics and Management.

2 hrs. lect., 4 hrs. lab., first half.

Origin of soil material; formation; classification, constituents, organic matter; moisture and its control; aeration; temperature; erosion; tillage of dry and irrigated lands; rotations.

Text-book: *Soil Physics and Management*, Moshier & Gustafson.

52. Soil Fertility and Fertilizers.

2 hrs. lect., 4 hrs. lab., sec. half.

Yields as affected by fertility, rotations and different systems of farming; composition and management of Canadian soils; composition and value of manures and fertilizers.

Text-book: *Soil Fertility and Permanent Agriculture*, Hopkins.

53. Advanced Fertility. 2 hrs. lect., 4 hrs. lab., first half.

Special work with soils in which the student is interested; pot culture experiments; systematic study of investigational work from various experiment stations.

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54. Soil Bacteriology. 2 hrs. lect., 3 hrs. lab., sec. half.

Soil micro-organisms and factors influencing their activity; decomposition of crop residues and manures; nitrogen fixation and preservation; effect on insoluble plant foods.

55. Irrigation and Drainage. 2 hrs. lect., sec. half.

Character of water used for irrigation; time and amount of application; measurement and distribution; duty; removal of excess; control of alkali.

Graduate Courses.

130. Plant Food Supplies. 1 hr. lect.

Critical study of the world's plant food supplies.

131. Seminar in Soils. 1 hr. lect.

Reports by students and instructors on the literature of selected topics, with class discussions.

DEPARTMENT OF SURGERY AND CLINICAL SURGERY

Professor F. H. Mewburn, Assistant Professors, A. Blais, G. C. Gray, H. H. Hepburn, A. R. Munroe, W. A. Wilson, Lecturer in Rhino-Oto-Laryngology, C. V. Jamieson; Lecturer in Orthopædic Surgery, F. H. H. Mewburn; Lecturer in Genito Urinary Surgery, E. C. Smith; Lecturer in Ophthalmology, R. B. Wells; Instructor in Surgery, Evan Green; Instructors in Clinical Surgery, L. C. Harris, I. W. T. McEachern, J. A. McPherson, J. L. Petitclerc, N. L. Terwilliger; Radiologist, R. Procter.

51. Surgery and Clinical Surgery. 1 hr. lect., 7 hrs. clin.

Principles of surgery; clinical instruction in inflammatory processes, sepsis, hæmorrhage, hernia, surgical landmarks, history taking, wounds, fractures, bandaging.

SURGERY

52. Surgery and Clinical Surgery. 1 hr. lect., 6 hrs. clin.

General surgery, including attendance at ward and other clinics, outdoor department, and operating room.

53. Surgery and Clinical Surgery. 1 hr. lect., 6 hrs. clinic.

During the final year, students will have the opportunity of acting as assistants to the internes of the hospital and will be expected to help in routine clinical laboratory work in the hospital, in writing histories and keeping up progress notes in careful detail, in routine ward-work, and in out-patient clinics. Special clinical lectures will be given during the session in the principles of general surgery, orthopoeedics, genito urinary surgery, radiology and dermatology. A clinical and pathological conference will be held once a week during the session.

Text-books: *Surgery*, Rose & Carless, Thomson & Miles; *Keen's Surgery*; *Surface Anatomy*, Treves & Keith; Davis, *Applied Anatomy*; *Minor Surgery*, Foote; *Operative Surgery*, Binnie; Jacobson, *Operations*, and *Surgery*, by Farmer and Rowland.

51. Ophthalmology. 1 hr. lect.

A preliminary course consisting of lectures and demonstrations with instruction in the use of instruments and appliances.

51. Rhino-Oto-Laryngology. 1 hr. lect.

A preliminary course consisting of lectures and demonstrations with instruction in the use of instruments and appliances.

52. Ophthalmology. 1 hr., first half

Clinical work in the hospital.

52. Rhino-Oto-Laryngology. 1 hr., sec. half.

Clinical work at the hospital.

Text-books: *Ophthalmology*, May; reference, de Schweinitz, Fuchs. *Rhino-Oto-Laryngology*, Laurens, Parker and Colledge; reference, Tilly, MacKenzie.

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51. Radiology. 1 hr. lect., first half.

Lectures on physics and technique of Radiology. Laboratory demonstrations on Flulroscopic examination of patients, and interpretation of Radiograms.

TOXICOLOGY

Assistant Professor Dunn.

Junior Course.

1. General. 1 hr., sec. half.

The nature and properties of poisons, their detection, and the application of "first aid" treatment.

Senior Course.

61. General 1 hr., sec. half.

Identical with Course 1.

DEPARTMENT OF VETERINARY SCIENCE

Dr. Talbot (special Lecturer).

Junior Courses.

1. (a) Elementary Agricultural Veterinary Science. 1 hr. lect.

Anatomy, physiology, materia medica.

(b) Agricultural Veterinary Science. 1 hr. lect.

Medicine and surgery, parasitology, obstetrics.

Senior Course.

51. Advanced Agricultural Veterinary Science.

DEPARTMENT OF ZOOLOGY

Associate Professor Rowan and Mr. Harkness.

Junior Course.

1. General Elementary Zoology (Arts). 3 hrs. lect., 3 hrs. lab.

Vertebrate and invertebrate types; histology; heredity, variation and evolution.

PHYSICAL EDUCATION

Text-books: Borradaile *Manual*, Shipley & McBride, Marshall and Hurst.

Reference: Parker & Haswell, Holmes.

2. General Elementary Zoology (Medicine).

3 hrs. lect., 3 hrs. lab.

Frog, rabbit and other types; dog's skull, cat's brain, hog's heart; parasitology; histology; heredity, variation and evolution.

Text-book: Borradaile, *Elementary Zoology*.

Reference; Parker & Haswell, Holmes, O'Donoghue.

3. Elementary Embryology (Second Year Medicine).

2 hrs. lect., 3 hrs. lab., first half.

Embryology of amphioxus, frog and chick to 48 hours; other selected types.

Text-books: Kellicott's *Chordate Development* and *General Embryology*, or McEwen's *Vertebrate Embryology*.

Reference: Lillie, Wilder.

DEPARTMENT OF PHYSICAL EDUCATION

.....
Director.

.....
Assistant Director.

The aim of the department is to contribute to the health of the student body by encouraging participation in all forms of athletic games, and by conducting classes in physical training suited to the needs of the various groups of students.

Work in this department is compulsory for all students of the first and second years. All students of these years must register with the Department of Physical Education.

Students playing on athletic teams within the University may be exempted from regular attendance at classes for the periods they are playing on such teams, such exemptions to be determined by the Director of Physical Education.

All candidates for teams in athletic sports must submit to a medical examination to determine their physical fitness.

UNIVERSITY OF ALBERTA

Course 1. 2 hrs. per week.

Physical education for first year students.

Course 2. 2 hrs. per week.

Physical education for second year students.

CANADIAN OFFICERS TRAINING CORPS

University of Alberta Contingent

The Canadian Officers Training Corps consists of Contingents at most of the Canadian Universities. Each Contingent is a unit of the Active Militia, being governed by special regulations under which it cannot be called out for active service as a unit. The Contingent is not officially a part of the University, but the President of the Military Committee and the senior officers of the Corps must be members of the University staff.

The Corps provides an opportunity for those students who are interested in military training to qualify as officers during their University course. Two Certificates of Proficiency, "A" and "B", are obtainable by members of the Corps. The standard required for Certificate "A" is that of the commander of a platoon in an infantry company. To obtain this certificate, a member must complete two years efficient service in the Corps and pass the prescribed examinations. Members who accept a commission in the Active Militia are exempted by this certificate from further examination for the rank of Lieutenant. Certificate "A" is prerequisite to Certificate "B", which in a similar manner qualifies for the rank of Captain.

The time required is about two hours per week. Enlistment is purely voluntary, but the membership of the Contingent is limited.

DEPARTMENT OF EXTENSION

Director, Albert Edward Ottewell, M.A.

Secretary of the Department, Edward Annand Corbett, M.A.

Extension Librarian, Jessie Fleming Montgomery, B.A.

Lecturer, Harald S. Patton, M.A.

This department is organized to help those unable to attend regular university classes, and carries on work along the following lines:

DEPARTMENT OF EXTENSION

Extension Lectures

A limited number of extension lectures on various subjects may be arranged in conference with the Director of the Department of Extension.

Division of Debating and Public Discussion

Outlines are published for the assistance of debaters and material on subjects of debates is lent by the University. This material is available to all residents of Alberta free of charge. To applicants from points outside of the Province a charge of fifty cents is made for each package lent.

Material for debate has been prepared on the following subjects: Canadian Navy; Capital Punishment; Closed versus Open Shop; Co-education; Commission Government of Cities; Compulsory Military Service in Canada; Compulsory Military Training in Canada; Compulsory Social Insurance; Consolidated Rural Schools; Co-operative Banking; Co-operative Trading; Direct Legislation; Educational Qualification for Suffrage; Gary School Plan; Government Ownership of Railroads; Heredity versus Environment; Imperial Federation League of Nations; Literary Test for Immigrants; Military Training in Schools; Minimum Wage; Monroe Doctrine; Mothers' Pensions; Motion Pictures in Education, Place of; Municipal Ownership of Public Utilities; Oriental Immigration; Parliamentary versus Presidential Form of Government; Peace versus War; Platform versus Press; Prohibition, Proportional Representation; Protection versus Free Trade; Public Defender; Reciprocity with the United States; Rural versus City Life; Simplified Spelling; Single Tax; Socialism; Tractor versus Horse; Trade Unions; Woman Suffrage; Canadian Tariff; School Curriculum; Limitation of Inheritance; Free Municipal Hospitals; National School System; Control of Natural Resources; Motion Pictures; Chinese and Japanese Immigration; Labor Strikes; Newspapers; Novel Reading; Vocational versus Liberal Education; Departmental Store (Mail Order Business); Smoking; Co-operative Laundries and Kitchens; Agricultural Immigration; Coal versus Gas; Newspapers (Details of Crime); Local Banks versus Branch Banks; Provincial Bank; National Land Bank.

A manual of instruction for debaters is also available.

In connection with this division a High School Debating League is organized year by year. Each year a large number of the high schools of the province have entered the league.

UNIVERSITY OF ALBERTA

Division of Travelling Libraries

Travelling libraries are lent to communities where no public libraries exist. For this purpose over 10,000 volumes are at present available. During the present session over two hundred libraries have been in circulation. A special feature of this service is the open shelf list from which students may borrow individual volumes. A printed catalogue is supplied to would-be borrowers for twenty-five cents.

The Department also offers assistance to those who wish to do systematic reading in a particular field, literature, science, history, politics, sociology, etc. With the help of members of the University Faculty outlines on the desired subject will be prepared and reference books will be furnished from the open shelf library.

Division of Visual Instruction

This division consists of:

A.—Lantern Slide Service. The department has a lantern slide library of three hundred and fifty sets of lantern slides, to which additions are continually made, accompanied by printed or typewritten lectures, as well as over one thousand miscellaneous slides. Payment of express charges and the making good of loss or breakage is the only expense for this service. A list of lantern slide sets may be had on application.

B.—Moving Picture Service. The system of moving pictures adopted and recommended by the Department of Extension is the Safety Standard, utilizing a practically non-inflammable film, and consequently free from insurance and other restrictions. Machines can be purchased from the Department at the lowest possible price. The Pathoscope is for use in small rooms and is equipped with a generator turned by hand. The Victor Safety Cinema operates successfully in larger halls up to 100 feet from the screen. It can be furnished for use, on 110 volt circuit, with Delco or other low voltage plant, or with twelve volt storage battery. Except in the latter case, motor drive is available. Film service is provided on a rental basis sufficient to take care of handling and depreciation, particulars of which will be furnished on request.

Any further information will be furnished upon application to The Department of Extension, University of Alberta, Edmonton, Alberta.

CORRESPONDENCE COURSES

INDUSTRIAL LABORATORIES

James Alexander Kelso, M.Sc. (Queen's),
Director.

Arthur Galbraith Scroggie, M.Sc. (Alberta),
Assistant.

The Department of Industrial Laboratories operates fully equipped Chemical, Physical, Assay, Coal, Cement and Concrete Laboratories, etc., for the carrying out of all tests on materials. Investigations for the industries and for the development of the natural resources can be undertaken.

For complete information and schedule of fees apply to the Director.

DEPARTMENT OF CORRESPONDENCE COURSES

Duncan Stewart MacKenzie, Director of Teachers' Courses.
Professor Lehmann, Associate Professor Adam, Assistant
Professor Hardy, Mr. de Savoye, Mrs. Mitchell,
Mr. Young, Mr. Taylor.

The Correspondence Department offers instruction in the work of Grade XII as prescribed by the Alberta Department of Education. The object of the work is to enable teachers who hold Second Class Certificates to pursue further academic study in preparation for the Grade XII examination. The successful completion of this course, while giving the required academic standing for First Class Teachers' Certificate, will also give standing pro tanto for First Year University courses. These correspondence courses have proved particularly attractive to the following classes of teachers:

- (a) Those holding second class standing who desire to advance to first class;
- (b) Those who have obtained Grade XII standing with one or more conditions;
- (c) Those who are contemplating University courses and who by completing certain Grade XII courses will be eligible to enter as undergraduates of the Second Year in Arts.

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Teachers who contemplate a University course, and who have not taken languages in the earlier High School grades, should endeavour to remove these deficiencies by attendance at Summer School or otherwise. The Laboratory instruction given in Physics and Chemistry during the summer session will also be found exceedingly helpful, if not even essential, to those desirous of completing one or both of these subjects through correspondence tuition.

Prospective students are invited to write to the Director for particulars.

Affiliated Colleges

ALBERTA COLLEGE SOUTH

Theological College of the Methodist Church Government

The management and direction of Alberta College are vested in a Board of Governors appointed every four years by the General Conference of the Methodist Church and incorporated by Act of Parliament.

The officers of the Board are:

Chairman—H. R. Smith, M.D.

Secretary—C. E. Race, M.A., C.A.

Treasurer—W. T. Henry, Esq.

Executive Committee—H. R. Smith, M.D.; C. E. Race, M.A., C.A.; W. T. Henry; Rev. A. R. Aldridge, B.A.; C.G. Corneille, B.A.; Rev. T. C. Buchanan, D.D.; H. H. Crawford, M.L.A.; A. T. Cushing, B.A.; J. F. Fowler; Rev. F. S. McCall, B.A.; C. F. Newell, K.C.; James Ramsey, M.L.A.; Rev. R. L. McTavish; Rev. A. S. Tuttle, M.A., D.D.

Faculty

Rev. A. S. Tuttle, M.A., D.D. (Mt. Allison),

Principal, Professor of Philosophy of Religion.

Rev. A. D. Miller, M.A. (Toronto), B.D. (Victoria),

Professor of Old Testament Languages and Literature

Rev. Clyo Jackson, M.A. (Toronto), B.D. (Victoria),

Ph.D. (Chicago),

Professor of New Testament Literature

Miss Nettie Burkholder, B.A. (Victoria),

Lady Principal, Lecturer in English and History

Rev. S. R. Laycock, B.A. (Toronto), M.A., B.D., B.Educ.

(Alberta),

Lecturer in Classics, and Religious Education

Mr. William Line, B.Sc. (Mt. Allison), M.A. (Alberta),

Lecturer in French and Sciences

Thomas Hart, B.Sc., M.A. (Alberta)

Lecturer in Mathematics

To be appointed,

Lecturer in Elocution and Oratory

Mr. Herbert Lawrence,

Registrar

UNIVERSITY OF ALBERTA

Courses of Study

Preparatory. Thorough courses of instruction are given in all subjects leading to matriculation into the University of Alberta, and to the Departmental Examinations in Grades X and XI, for teachers. These studies are also required for entrance upon the study of Theology.

Theological. (a) Ordinary: A three-year course of study in Theological branches including certain required and optional subjects in Arts in the University of Alberta. The Diploma of the College is conferred upon the completion of this course.

(b) Graduates': A more exacting course designed for those who have completed an Arts course before entering upon the study of Theology.

(c) Degree Course: Additional studies leading to the Degree of Bachelor of Divinity, conferred by the University of Alberta.

(d) A special one-year's course for Christian workers.

All Theological courses in Alberta College are open to students of other denominations with no discrimination.

Residence

The College has one of the best residence buildings in Canada, capable of housing about 125 students, located on University grounds in a most fortunate relation to the University community.

During the last two years there has been a large increase in the number of students in the matriculation department. This department offers an especially good opportunity to those who must make up one or two subjects to gain full matriculation, as these may be carried in addition to University subjects, and thus time saved.

ROBERTSON COLLEGE

Theological College of the Presbyterian Church

This college was placed by action of the General Assembly of 1910 in connection with the Provincial University. The name, "Robertson College," was decided upon, October 10th, 1911, to perpetuate the memory of the pioneer missionary Superintendent of Western Canada, the Rev. James Robertson, D.D.

ROBERTSON COLLEGE

Government

The management and direction of Robertson College are vested in a Board of Management and a Senate, appointed annually by the General Assembly, of which the following are the officers:

Board of Management

Chairman—William Short, K.C., Edmonton.
Vice-Chairman—R. J. Hutchings, Esq., Calgary.
Secretary—Rev. W. M. Grant, M.A., Edmonton.
Treasurer—A. F. Ewing, Esq., B.A., K.C., ex-M.L.A.,
Edmonton.

Senate

Chairman:

Rev. J. M. Millar, M.A., B.D., D.D.,
Professor of English Bible and Religious Education.

Registrar:

Rev. J. Macartney Wilson, M.A., B.D., D.D.

Faculty for 1924-25:

Rev. J. M. Millar, D.D.
Professor of English Bible and Religious Education

Rev. A. T. Barnard, M.A., B.D.,
*Head of Extra-Mural Department; Lecturer in
Church History*

Rev. J. Macartney Wilson, D.D.,
Professor of Systematic Theology

And the following professors of Alberta College:

Rev. A. S. Tuttle, M.A., D.D.,
Philosophy of Religion

Rev. Cloy Jackson, M.A., Ph.D.,
Professor of New Testament Literature

Rev. A. D. Miller, M.A., B.D.,
Professor of Old Testament Literature

Rev. S. R. Laycock, M.A., B.D., B.Educ.,
Assistant Professor of Religious Education

UNIVERSITY OF ALBERTA

Course in Theology

The ordinary curriculum of study for the ministry of the Presbyterian Church demands the B.A. Degree (including Greek or Hebrew), and three years in Theology. Course No. 2 calls for three years in Arts as the preliminary to Theology. Any other course is "Special", and can be assigned by the authority of the General Assembly only.

Co-operation in Instruction

The plan of co-operation in instruction is carried on by Robertson and Alberta Colleges with very gratifying results.

Courses for the Degree of B.D.

The Degree of B.D. is conferred by the University. The courses are given in the affiliated Theological Colleges and approved by the University. For information as to subjects of study, text-books, fees, etc., apply to Mr. C. E. Race, M.A., C.A., Registrar of the University.

The Degree of D.D.

The degree of Doctor of Divinity is conferred "*honoris causa*."

Library

The library contains over 4,000 volumes and is available to students, missionaries, missionary societies and ministers.

College Residence

Robertson College occupies at present a residential block in Edmonton South, 11032 Whyte Ave., purchased by the Board of Management and furnished by the efforts of the Women's Guild. Application for rooms for the session of 1924-25 should be made to Principal J. M. Millar, who should also be communicated with by those desiring calendars containing complete information about Robertson College.

ST. AIDAN'S COLLEGE

ST. AIDAN'S COLLEGE

This college, operating under the authority of the Synod of the Anglican Diocese of Edmonton, was affiliated with the University of Alberta by resolution of the Senate, May 15, 1919.

Information regarding courses may be obtained on application to the Warden, the Right Reverend Henry Allen Gray, M.A., D.D., LL.D., Bishop of Edmonton.

AFFILIATED PREPARATORY SCHOOLS

Under the regulations of the Senate, preparatory schools and colleges which send students to the University Matriculation Examinations are affiliated with the University.

Under this arrangement the following are affiliated institutions:

Western Canada College, Calgary.

Alberta College, Edmonton.

Mount Royal College, Calgary.

Alberta College (North), Edmonton.

Llanarthey School for Girls, Edmonton.

Register of Students

SESSION 1923-24.

A—Faculty of Arts and Sciences; Ag—Agriculture; Com—Commerce; Corr—Correspondence; D—Dentistry; Div—Divinity; H.Ec.—Household Economics; L—Law; M—Medicine; N—Nursing; PhmD—Pharmacy Degree; PhmL—Pharmacy Licence; SS—Summer Session.

c—conditioned student; p—partial; s—special student; grad—graduate student. The numbers refer to the year of the course.

Adams, C. R.	c Com 1	Barclay, F. W.	c L 2
Addinell, W. E.	D 3	Bard, Miss G.	H.Ec 3
Addison, F. W.	Ag 4	Barford, Miss M. W.	c A 1
Agnew, A. M.	M 4	Barker, A. S.	Com 2
Agnew, T. J.	M 3	Barnes, Miss V. F.	A 3
Ahrens, A. C.	D 2	Barnett, W. E.	Corr
Ainlay, H. D.	p A	Barnett, R. A.	SS
Alexander, Miss F.	s A	Bassett, K. W.	c Com 1
Alexander, Miss F. E.	A & M 2	Bandoux, Miss M. N.	Corr
Alexander, F. W.	p Com 1	Beach, J. E.	Com 3
Alexander, R. P.	A 2	Beamer, Miss M. E.	Corr
Allan, W. S.	M 3	Becker, Miss R.	PhmD 3
Allen, E.	s A	Beckwith, E. M.	A 3
Anderson, J. A.	Ag 2	Bedford, R. H.	Ag 3
Anderson, Miss M. M.	A 2	Belangee, Miss F. M.	Corr
Anderson, Miss M. V.	c A 1	Bell, Miss H. G.	p A
Anderson, R. L.	M 4	Bell, L. V.	A 3
Anderson, W. A.	Ag 4	Bell, Miss M. H.	H.Ec 1
Andrews, Miss E. E.	A 4	Bellew, Mrs. E. T.	p A
Annett, W. L.	c M 1	Bennett, Miss E. M.	Corr
Antrobus, F.	c A 2	Bennett, Miss H. A.	A 2
Archer, N. J. W.	c A & M 1	Beny, Miss H.	A 4
Archibald, Miss M. C.	A Grad	Bercov, A.	L 3
Armstrong, Miss H. S.	A 4	Bercov, H. A.	M 5
Armstrong, J. H.	S 2	Beresford, T. F.	p A
Armstrong, Miss J. E.	c A 1	Bibby, R.	c S 1
Asplund, C. O.	Ag 1	Bickell, Miss J. C.	A 4
Atkinson, Miss G.	A 2	Biraud, F. P.	Ag Grad
Auger, Miss J. A.	PhmD 2	Bishopric, C. F. O.	Ag 2
Auld, J. T.	p A	Bissell, Miss I.	Grad
Auld, J. T.	SS	Bissett, C. S.	Com 3
Aunger, W. R.	p D 1	Blair, S. M.	S Grad
Austin, Miss M. K.	c A 2	Bloor, W. G. K.	A & L 3
Auxier, G. W.	c A & L 2	Blow, Miss W.	A Grad
Backman, W. S.	Ag 3	Blue, Miss L. M.	c A 1
Badcock, D. G.	p A	Bocock, J. B.	S 2
Bagnall, Mrs. L.	A Grad	Booher, J. B.	Ag 1
Bain, Miss A. R.	Com 1	Bosmans, S. E.	Corr
Bainbridge, S.	A Grad	Bossenberry, Miss I. A.	c A 2
Baker, H. M.	A 3	Bothwell, S. A.	c A & S 1
Baker, M.	L 2	Botsford, Miss J. A.	Corr
Baker, R. M.	Com 4	Bowman, R. F. P.	S 2
Baker, R. I.	A 4	Boyce, A. C.	Corr
Balaam, Miss R. V.	A 4	Boyce, W. J.	PhmL 1
Baldwin, A. V.	S 4	Boyd, R. W.	c A & M 1
Baldwin, A. V.	A & M 3	Boyle, H.	c Com 1
Balfour, H. E.	A Grad	Boyle, Miss H. M.	A & L 2
Balfour, H. E.	SS	Bradford, A. C.	A & M 4
Baltzan, H. L.	A 4	Bradford, Miss M.	A 4
Bamforth, C. W.	PhmL 2	Bradley, G. C.	M 2
Barber, Mrs. A.	p A	Bramley-Moore, A. G.	L 2
Barclay, Miss C.	A 2	Bratz, H. C.	c S 2

STUDENTS

Bright, A. U.	A & L 3	Chard, Miss D. J.	A 2
Broadbridge, Miss R. P.	Grad	Charlesworth, Miss D.	Com 4
Brock, Miss M. M.	p A	Charlesworth, G. S.	M 4
Brown, C. B.	A 1	Chenier, R.	C 2
Brown, D. M.	A 2	Chisholm, L.	M 3
Brown, J.	L 2	Christie, Miss E. M.	A 1
Brown, R. J.	c A 1	Christie, H. R.	c A & M 4
Brown, W. R.	Ag Grad	Clark, H. C.	A Grad
Bruce, R.	SS	Clark, H. R.	c Ag 1
Brumwell, Miss E. E.	Com 1	Clark, Miss K.	p A
Brumsden, E. W.	Ag 1	Clarke, R.	c S 1
Brunton, J. F.	M 3	Clarke, A. E.	A & Ag 4
Bryan, G. J.	L 2	Clarke, Miss I. S.	p A
Bryden, D. C.	A & S 3	Clarke, Miss M. E.	H.Ec 3
Bryden, R. B.	S Grad	Clarke, P. D.	L 3
Brydon, Miss L.	A Grad	Clarke, T.	A & L 4
Buchanan, J. C.	Corr	Claxton, H. G.	A & M 2
Buckley, Miss B. G.	A 3	Claxton, J. F.	PhmD 2
Budd, W. S.	L 4	Clermont, Miss M. M.	Com 2
Buell, A. L.	M 3	Clutton, Miss V. R.	H.Ec 2
Bulyea, Miss J. M.	N 1	Cobb, Miss E.	A 2
Bunyan, Miss I.	Corr	Cockle, W. L.	c M 1
Bures, A. J.	Com 4	Collier, A. B.	S 2
Burgess, Miss A. M.	M 3	Collins, Sr. G. E.	SS
Burgess, Miss E. E.	A 1	Collip, J. B.	M 5
Burgess, Miss K. M.	A 1	Colter, R. K.	SS
Burgess, W. D.	S Grad	Cook, Miss B. L.	p A
Buriak, M.	M 2	Cook, Miss J. M.	A 4
Burke, E. W.	A & L 1	Cook, W. H.	Ag 2
Burnham, Miss M. H.	Corr	Coone, Miss L. A. M.	A & M 1
Burstein, J.	D 2	Coone, Miss W. H.	A & L 1
Butchart, E. A.	A & L 4	Cooper, Miss M. M.	Com 2
Byers, Sr. E. M.	p A	Cooper, R. H.	M 2
Byers, Miss L. E. V.	A 1	Coote, Miss M. K.	Corr
Cain, E. F.	M 1	Cormack, E. W.	Ag 3
Cairns, J. M.	A & M 3	Cornell, Miss G.	Corr
Calder, J.	M 1	Cornwall, Mrs. M. B.	Corr
Caldwell, D. B.	PhmL 1	Coupez, L. A.	c PhmD 1
Caldwell, O. J.	Com 4	Coutts, R. J.	SS
Caley, J. F.	S 2	Coutts, Miss R. J.	p A
Calhoun, W. P.	D 3	Cowper, Mrs. M. C.	Corr
Cameron, A. E.	S Grad	Cowper, M.	SS
Cameron, A. L.	A & S 1	Cox, A. K.	S 3
Cameron, D. M.	L 3	Cox, Miss D. I.	Corr
Cameron, Mrs. D. K.	Corr	Cox, Miss M. C.	Corr
Cameron, G. J.	M 2	Craig, Miss C. D.	c A 1
Cameron, Miss J. M.	p A	Craig, Miss D. D.	A & L 1
Cameron, R. A.	A & L 4	Craig, H. E.	Ag 1
Campbell, Miss A.	p A	Craigie, G. M.	SS
Campbell, S. C.	A & L 4	Cram, Miss L. A.	A Grad
Campbell, C. S.	SS	Crawford, A. R.	c A & M 1
Campbell, E. A.	M 4	Crawford, D. J. M.	M 3
Campbell, J. A.	c D 1	Crawford, G. M.	c D 1
Campbell, J. A.	M 2	Crawford, G. M.	SS
Campbell, W. P.	S Grad	Crawford, H. W.	A & M 4
Carlisle, J. A.	c A 1	Crawford, Miss M. R.	A Grad
Carlson, C. E.	c A 1	Croisetiere, J. A.	PhmL 2
Carlson, Miss I. L.	A 2	Cromarty, W. B.	A & L 3
Carmichael, Miss B.	Grad	Cross, E. E.	A & L 4
Carruthers, Miss H.	s A	Cumberland, Miss H. S.	c A 1
Carson, Miss E.	p A	Cumming, Miss I.	A 2
Carson, Miss E.	SS	Currie, D.	A & M 4
Carson, Miss F.	c A 2	Cutler, G. H.	Ag. Grad
Carswell, Miss H. M.	A 2	Dahl, P.	Ag 3
Carswell, Miss H. M.	SS	Dain, E. W.	A 3
Cartwright, H. D.	A Grad	Dalglish, Miss L. E. A.	A 2
Cassels, J. W.	A 4	Dalkin, T. W.	S 2
Cassels, W. H.	p A	Davidson, W. M.	S 4
Castor, Miss I.	A 3	Davies, C. E.	M 3
Caswell, Miss E.	M 4	Davies, G. L.	c D 1
Cayford, E. H.	M 4	Davies, J. A.	Corr
Chalmers, Miss H. H.	A Grad	Davies, P. G.	A & L 3
Chamberlin, V. L.	A 1	Davies, W. J.	Com 2
Chambers, A. L.	A 1	Davis, Miss D. L.	p A
Chappelle, G.	M 2	Davis, E. S.	S 2

UNIVERSITY OF ALBERTA

Davis, Miss M. E.	Corr
Davis, S.	c Com 1
Dawson, G. S.	S 5
Dawson, P.	s A
Day, E. W.	L 2
Dean, W. J.	c S 2
Dean, W. R.	A & Ag 1
Deane, Miss M. R.	H.Ec 1
Deeprise, W. A.	A 2
De Mille, W. E.	L 3
deSavoye, L. A.	A 3
Devlin, T. P.	Ag 3
Dick, K. L.	Corr
Dickie, Miss M. C.	A 2
Dickson, H. H. L.	S 1
Dickson, Miss J.	Corr
Dickson, Miss M.	c A 1
Dixon, Miss M. M.	Corr
Dobbie, M. H.	PhmL 2
Dobry, J. J.	M 2
Dobry, Miss M.	A 1
Dobson, H. E.	A Grad
Dobson, Miss L. M.	c A 1
Donaldson, G.	M 2
Dorman, E. P.	s A
Dorosh, W.	Corr
Douglas, W. S.	s A
Dowding, Miss E. S.	A Grad
Downing, P. W.	L 4
Downs, Mrs. A.	s Grad
Dragan, G. E.	M 4
Drew, A. W.	S 2
Drinnan, R. G.	SS
Driscoll, Miss A. C.	A 4
Driscoll, J. R. C.	c L 3
Duffie, Miss M.	Corr
Duggan, E. M.	c Com 1
Duggan, K. P.	Com 4
Dunfield, W. A.	S 1
Dunlop, R. H.	Ag 3
Dunlop, R. W.	S 3
Dunn, A. F.	M 1
Dunne, R. J.	M 2
Dynes, Miss G. B.	p A
Eadie, W. W.	M 5
Edgar, Miss B. J. O.	H.Ec 2
Edgett, G. L.	A Grad
Edwards, Miss E. F.	p A
Edwards, W. H.	p A
Edwards, W. H.	SS
Edworthy, S.	A Grad
Elizabeth, Sr.	Corr
Ellehill, O. J.	Ag 1
Elliot, F. W.	Corr
Ellis, F. C. J. P.	A & M 2
Ellis, I. M.	s A
Ells, Mrs. V. B.	Corr
Emmett, F. J.	A & M 2
English, J. F. K.	M 3
English, J. H. F.	Com 3
English, R. E.	Ag 1
Esdale, Miss M. A.	SS
Errol, Miss J.	p A
Esdale, Miss R. M.	A 1
Ethridge, F. M.	S 4
Eubank, Miss E. M.	A 3
Evans, Miss E. L.	A 3
Evans, H.	SS
Evans, R. W.	SS
Evenson, A. B.	c A 1
Ewing, Miss S. M.	Corr
Fagan, Miss E. B.	L 2
Fairfield, Miss A.	H.Ec 4
Fairman, W. M.	SS
Falconer, J. G. F.	SS

Fanjoy, W. T.	S 5
Fanning, Miss G. M.	H.Ec 2
Farnalls, Miss D.	H.Ec 2
Fawcett, W. C.	Ag 1
Ferguson, J. D.	Grad
Ferrie, C. H.	PhmL 1
Fetherstonhaugh, J. E.	Ag 2
Ficht, J. P.	Ag 4
Findlay, Miss M. I. S.	SS
Findlay, W. F.	s A
Fisher, F. S.	S 5
Fisher, Miss H. M.	L 4
Fitzsimon, Mrs. E. L.	L 1
Fitzsimmons, Mrs. E. A.	SS
Fitzsimmons, N. S.	SS
Flack, C. R.	A 3
Flater, N. F.	M 3
Fleming, Miss F. M.	A 3
Foerster, E.	Corr
Folkins, Miss J. E.	H.Ec 3
Folkins, Miss O. M.	A 2
Ford, F. A.	L 3
Forester, Miss E.	A Grad
Forshaw, W.	A Grad
Forster, F. G.	S 1
Fortier, Sr. H.	SS
Foster, L. H. H.	Ag 3
Foulds, Miss E.	p A 1
Fraser, A. A.	S 5
Fraser, W.	SS
Freeman, H.	p A
Freifeld, D.	c A 1
French, G. C.	c A & L 2
Frickleton, W. W.	PhmL 2
Froman, D. K.	A 1
Fryer, J. R.	Grad
Fullerton, G. W.	S 2
Fulmer, Miss M. M.	s A
Fuog, Miss A. H.	A Grad
Galbraith, A. S.	Corr
Galbraith, F. O.	c M 1
Gale, H. L.	c L 2
Gale, M. L.	S 2
Gallagher, Miss D. M.	A 1
Garbu, T. S.	L 1
Gardner, E. H.	Ag 1
Gardner, S. E.	c A 2
Gaunce, Miss E. H.	Corr
Gaunt, R. J.	L 1
Geake, L. J.	c A 1
Genereux, A. G.	M 4
George, G. R.	c S 1
George, H. W.	c S 2
Gerrie, Miss C.	A 4
Gerrie, J. W.	A & D 4
Giberson, Miss L. G.	M 3
Giffen, A. W.	A & S 3
Giffen, Miss B.	A Grad
Giffen, J. W.	A & M 3
Gilbert, D. L.	Ag 4
Gilmore, J. M.	PhmL 1
Gimby, Miss M. M.	A 2
Gish, W. K.	A 3
Glanville, Miss N. M.	N 1
Glass, L. S.	c Com 2
Glenn, J. S.	M 5
Goff, Miss E. M.	Corr
Goff, Miss E. M.	SS
Gold, Miss M. H.	A Grad
Goldberg, W. D.	PhmD 3
Goldstein, G. R.	M 3
Goodall, Miss A. M.	PhmD 3
Goodall, D.	A 2
Goodall, L. B.	Ag 1
Goode, F. E.	c S 1

STUDENTS

Goodwin, Miss L. A.	SS	Hodgson, W. M.	A 1
Gosko, M.	Corr	Hoffman, Miss D. F.	SS
Gould, G. D.	Corr	Hollinshead, G. F.	PhmD 4
Gould, W. W.	SS	Hollinshead, Mrs. L. E.	A 4
Gowan, E. H.	S 4	Holmes, C. R. M.	Ag 1
Gowda, F.	c D 1	Holmes, Miss E. M.	Corr
Graham, Mrs. E.	Corr	Holmes, Miss N. M.	c A 2
Graham, Miss M. K.	A 4	Honey, C. A.	Ag 2
Grant, Miss M.	Corr	Hood, J. E.	c D 1
Gratz, Miss A.	H.Ec 2	Horne, H. W.	A & M 3
Gratz, Miss M. M.	A 4	Hotson, I. J. E.	s Grad
Green, E. E.	SS	Houghtaling, R. W.	c S 1
Greenberg, C.	M 3	Houston, H. D.	c S 2
Greer, Miss F. M.	p A	Howe, J. W.	Ag 2
Grimson, J. C.	M 5	Hubbard, S. W.	c Ag 1
Grindley, F. L.	A & S 4	Hueston, Miss L. A.	p A
Grindley, T. W.	A & Ag 5	Hughes, E.	s S
Gudmundson, A. E.	S 1	Hughes, J. M.	Corr
Gundesen, Miss H. B.	p A	Hughes, R. J.	Corr
Haddigan, Miss E. T.	p A	Hull, Miss T. V.	c A 1
Hager, B.	p A	Hume, Miss S. E.	SS
Haig, A. A.	M 4	Hunt, E. A.	M 3
Haig, W. R.	M 4	Hunt, H. B.	M 1
Haight, J. L.	p A	Hunter, E. F.	A 1
Halabisky, N. D.	M 3	Hunter, J. R.	Ag 1
Hall, Miss F.	SS	Husband, C. D.	D 1
Hall, Miss F.	Corr	Huskins, C. L.	Ag Grad
Halliday, F. A.	PhmL 2	Hustler, G. F.	A Grad
Hallman, V. R.	Ag 1	Huston, W. J. H.	Div
Halstead, Percy	Corr	Hutton, A. E.	p A
Hamilton, Miss D. I.	A 1	Hutzulak, P.	M 3
Hamilton, Miss E. G.	M 4	Hyndman, L. D.	L & A 2
Hamilton, R. C.	c A 1	Iddings, Miss T. A.	A 4
Hansen, D. A.	S 3	Inkin, Miss M. E.	N 1
Harback, F. R.	c A 2	Inkster, Miss H. E.	p A
Hardin, H. F.	PhmD 3	Inkster, Miss C. D.	c PhmL 1
Hardin, N. M.	Phm Grad	Irwin, F. P.	A 2
Hargrave, J. H.	A & S 3	Iversen, R. C.	Com 2
Hargreaves, J. P.	s A	Jackson, Miss E.	c A 1
Hargrove, P.	S 1	Jackson, R. B.	p A
Harkness, D. S.	A 4	Jaffary, Miss E. A.	A 3
Harley, Miss L. J. V.	c A 1	Jagoe, Miss E.	A 2
Harper, W. J.	Ag 1	Jamieson, F. G.	Corr
Harris, J. E.	A 1	Jamieson, K. R.	A & L 4
Harrison, R. H. C.	L 2	Jargo, R. L.	s Ag
Harrison, R. W.	Com 3	Jarret, W. A.	M 3
Hart, T.	A Grad	Jeffery, C. V.	Com 2
Harvey, Mrs. L.	s A	Jessup, Miss D. M.	c A 1
Haslam, H. B.	A 1	Johanson, Miss L.	Corr
Haw, Miss O. V.	A 3	Johns, C. K.	Ag 3
Haworth, D. C.	D 2	Johnston, Miss E. K.	Grad
Haworth, G. C.	M 3	Johnson, E.	Ag 1
Hayes, A. E.	Div	Johnson, E. A.	M 3
Hayes, Sr. J.	A 4	Johnson, F. D. B.	A Grad
Hayes, Sr. J.	SS	Johnson, G. C.	A & M 2
Haywood, N. A.	Corr	Johnson, H. G.	A 1
Heathcote, Miss L. M.	A 4	Johnson, Miss L. B.	s A
Hedley, R. W.	A Grad	Johnson, M. J.	A 3
Hedley, R. W.	SS	Johnston, Miss A. M.	Corr
Hemphill, J. R.	A 2	Johnston, F. D.	A & M 2
Henderson, J. R.	c Com 2	Jones, E. L.	S 4
Henderson, Miss M.	SS	Jones, L.	L 2
Henderson, R. D.	c A & L 3	Jones, I.	S 5
Herbert, W. B.	A Grad	Joyce, Miss A. F.	A & M 3
Herbertau, Sr. J.	A 4	Karpoff, T. M.	SS
Hessey, Miss K. E.	Com 1	Karran, F. R. D.	A 4
Hewelcke, G. W.	c A 2	Kay, S.	M 3
Heywood, D. W.	S 2	Keer, C. W.	Ag 1
Hicks, C.	SS	Keir, Miss C. M.	A 2
Hicks, G. C.	A Grad	Keir, Miss K. M.	SS
Hicks, T. H.	c S 1	Kellam, E. C.	c PhmD 1
Hilliker, Miss E. A.	c A 1	Kelly, C. J.	c A 1
Hinchley, R. R.	A 3	Kelly, C. C.	Ag 3
Hislop, J. O.	c A & L 1	Kelly, J. C.	S 4
Hobbs, Miss E. H.	A 4	Kelly, L. C.	c A 2

UNIVERSITY OF ALBERTA

Kennedy, Miss A.	A & M 4
Kennedy, V. W.	SS
Kenney, Miss D. I.	N 1
Kent, H. E.	s A
Kerr, Mrs. E.	s A
Kershaw, E. V.	M 4
Kilpatrick, R. A.	SS
Kimnutt, Mrs. L. C.	Corr
Kindt, L. E.	Ag 2
King, H. C.	p A
King, C.	p A
Kirby, J. O. C.	L 1
Kirk, J. E.	A Grad
Kirkpatrick, W. A.	M 5
Kiteley, Miss S. F.	A 2
Klinck, W. R.	Corr
Klinck, W. R.	A 2
Klingaman, G. W.	A & M 2
Knight, Miss A. M.	p A
Knight, Miss A. M.	SS
Knighton, G. J.	S 3
Knox, Miss M. K.	s A
Kostash, H. A.	A Grad
Krause, M. E.	M 4
Krugen, Miss G. A.	SS
Kuhl, F. W.	c A 1
Kunst, F.	S 2
Kutz, R. L.	A 3
Kutz, W. M.	A 4
Kyle, J. S.	A & S 2
LaFleche, Miss H. M.	A Grad
Laidlaw, W. G. C.	c Com 1
Lambert, A. P. R.	c S 2
Lang, W. A.	Grad
Large, J. M.	A & M 2
Laudan, H. J.	M 2
Laverty, C. A.	S 2
Laverty, C. M.	A 2
Law, F.	M 5
Lawrie, J. B.	Ag 2
Laws, C.	PhmD 3
Lawson, Miss E. M.	H.Ec 4
Lawton, W. R.	S 4
Laycock, Miss M. C. G.	Corr
Laycock, S. R.	Grad
Lea, E. T.	S 2
Leahey, A.	Ag 2
LeBlanc, Miss Y.	p A
Lebourveau, H. B.	S 5
Ledingham, C. R.	Corr
Lee, C. G.	M 5
Lee, F.	PhmL 2
Lee, J. G.	A & M 4
Lefsrud, S.	A 2
Lehmann, J. V.	A 3
Lehmann, J. V.	SS
Leppard, C. E. E.	Com 2
Lessard, A.	L 2
Levasseur, W.	PhmL 2
Levy, J. R.	Corr
Levey, M. R.	M 4
Lewis, G. M.	M 5
Lewis, N. G.	Ag 2
Leisemer, A. P.	c D 1
Liesemer, E. J.	M 5
Lindberg, Mrs. E.	SS
Lindberg, Mrs. E.	Corr
Line, W.	A Grad
Lipsett, Miss E. M.	A 2
Lipson, B.	M 3
Lipson, B.	A Grad
Little, G. R.	A 2
Little, Miss G.	SS
Lloyd, V. M.	D 2
Long, Miss A. W.	SS

Longton, L.	s A
Lopushinsky, J. T.	c M 1
Loughlin, Miss H. A.	SS
Lowry, Miss C. L.	p A
Luckovich, M.	L 3
Lunn, G. H.	r A
Lauren, H. L.	M 3
Lynch-Staunton, F.	S 1
Lynch-Staunton, H.	L 1
Lyness, Miss R. E.	M 4
Lyse, Miss A. D.	Corr
McAllister, J. A.	Ag 4
McAllister, J. W.	Grad
McAlpine, Miss D. D.	A 2
McAra, J. M.	Ag 3
McArthur, Miss B.	SS
MacArthur, K. D.	A 4
Macaulay, A. F.	M 4
McBride, Miss M. D.	SS
McBrine, A. R.	L 3
McCaffary, Miss M. G.	A & M 4
McCallum, Miss B.	A 2
McCallum, D. L.	c A 1
McCallum, H. J.	PhmL 1
McCallum, M. G.	A & M 3
McCannel, D. A.	Ag 3
McClung, J. G.	Com 3
McClung, J. W.	L 3
McCorry, J.	A & L 4
MacCosham, Miss R.	p A
McCracken, C. F.	PhmL 1
McCray, Miss A. J.	c A 1
McDiarmid, R. G.	p A
Macdonald, Miss A. B.	N 1
Macdonald, B. J. S.	A & L 4
Macdonald, D. W.	Com 3
Macdonald, D. P.	A & L 2
Macdonald, Miss E. M.	s A
Macdonald, G. H.	D 1
Macdonald, I. B.	A & M 2
Macdonald, I. S.	A & L 2
MacDonald, J. A.	S 5
Macdonald, J. D. A.	S 4
Macdonald, J.	SS
MacDonald, J. K.	M 4
MacDonald, J. A.	M 4
MacDonald, R.	Corr
MacDonald, S. G.	A & L 3
MacDonald, W. A.	M 4
MacDonald, W. D.	Ag Grad
MacDonald, W. L.	S Grad
MacDonald, W. S.	S Grad
McDonnell, Miss O.	s A
McEwen, K. M.	c A 1
McFall, J. R.	Ag 1
McGarry, Mrs. D.	p PhmL
McGookin, J. Y.	A Grad
McGoun, Miss I. W.	Grad
MacGregor, E. S.	p A
MacGregor, H. A.	Corr
MacGregor, J. G.	A & S 2
MacGregor, J. W.	A & M 2
MacGregor, Miss L. C.	M 5
McGugan, A. C.	M 3
McIntyre, Miss E. H.	H.Ec 4
McIntyre, J. W.	Ag 1
MacKay, D. C.	c A 1
McKay, E. R. W.	PhmL 2
McKay, H. D.	A & L 4
McKelvey, J.	s A
McKenzie, C. H.	M 3
MacKenzie, D. B.	A 1
McKenzie, J. P.	SS
MacKenzie, C. G.	Corr
MacKenzie, Miss E. J.	p A

STUDENTS

MacKenzie, K. C.	A 2	Merron, Sr. M. R.	p A
MacKenzie, R. J.	c D 1	Metcalf, Miss E. E.	H.Ec 1
McKintrick, Miss J. K.	A 3	Meters, L. R.	PhmL 1
McLaren, W. L.	c Com 2	Michael, R. K.	Corr
MacLaren, W. H. R.	A & L 2	Michie, T. C.	M 4
McLaughlin, J. H.	A & Ag 3	Millar, Miss J. M.	A 3
MacLean, D. M.	A 4	Millard, M.	L 3
MacLean, R. R.	M 3	Millen, J.	S 5
McLean, S. B.	D 1	Miller, A. W.	L 3
MacLean, T. K.	M 2	Miller, G. M.	A Grad
McLeay, Miss D. E.	PhmL 2	Miller, W. W.	Ag 3
McLeay, Miss M.	p A	Miller, Miss V. N.	Corr
McLennan, Miss A. J.	PhmD 2	Milligan, R. J.	A 1
McLennan, Miss A. J.	SS	Mills, T. F.	PhmL 1
MacLeod, Miss A. J.	A 4	Milvain, V.	L 1
McLeod, W. J.	A Grad	Minter, W. D. F.	A 2
McMillan, Miss C. J.	p A	Misener, G. D.	SS
McMillan, Miss C. J.	SS	Miskew, P. A.	A Grad
McMillan, James	S 5	Mitchell, Miss B.	A 4
Macmillan, Miss J. C.	s A	Mitchell, J. C. W.	Corr
MacMillan, W. A.	A & L 4	Mitchell, L. F.	PhmL 1
McNabb, P.	Corr	Mitchell, R. R.	A & L 3
MacNab, Miss K. M.	A 4	Mix, L. C.	A 1
McNece, Miss J. E.	s A	Moffat, Miss F.	A 4
McNeil, A. O.	c A 1	Monaghan, W. J.	PhmL 1
McNeil, Miss H. C.	p A	Montgomery, G. E. H.	c D 1
McNeill, D. I.	A & L 4	Montgomery, Miss J. F.	Grad
McNiven, Miss M.	p A	Mooney, C.	c S 1
McNichol, Miss D. I.	c A 2	Moore, Miss S. E. L.	Corr
MacPhail, A. S.	c A 1	Moorhouse, C. E.	S 2
MacPherson, A. D.	A & M 3	Moorhouse, Miss J. F.	A 2
McPherson, A. F.	S 2	Moraw, Miss M.	A 4
McQueen, Miss H. A.	A 2	Moraw, Miss M.	SS
McRae, D. M.	L 3	Morgan, A. R.	A Grad
MacRae, E. M.	p A	Morrison, Miss B. R.	s Grad
McRae, W. C.	A 3	Morrison, D.	Ag 1
McRae, W. C.	SS	Morrison, D. M.	A & L 2
McTaggart, J. W.	c A 1	Morrison, J. A.	L 3
McVeigh, D. C.	Ag 1	Morrison, J. G.	c A 1
McVeigh, H. H.	c A 1	Morrison, Mrs. K.	s Grad
Mahaffy, Miss C. E.	A & M 2	Morrison, W. S.	Ag 1
Mahaffy, J. C.	L 2	Morrison, W.	p A
Mail, G. A.	Ag 3	Morrow, Miss L. M.	A 3
Main, Miss M.	A 2	Morrow, R. J.	M 5
Malaher, W. G.	Ag 2	Morvan, M. C.	SS
Malcolmson, P. H.	A & M 2	Mossman, C. C.	Ag 3
Mallock, J. G.	Ag 4	Moyle, Miss W. J.	H.Ec 2
Malo, B. N.	M 2	Mueller, W. H.	A 2
Malone, Miss M. M.	H.Ec 4	Murdoch, R. D.	Ag 3
Mann, H. H. M.	Ag 4	Murray, J. R.	M 1
Manning, Miss A. H. J.	Com 2	Murray, Sr. M. A.	SS
Manson, J. M.	Ag 1	Murray, W. B.	M 3
Manson, Miss M.	A 2	Musto, T.	s A
Manson, Miss M.	SS	Muttart, M. D.	s A
Manuel, Miss H.	N 1	Nash, Miss R. C.	Grad
Marion, G.	A Grad	Necker, C. A.	D 1
Markle, J. F.	c PhmL 1	Newland, Mrs. E. F.	A 2
Marshall, Miss A. L.	PhmD 3	Newland, H. C.	A Grad
Martin, M. W.	c PhmL 1	Newson, Miss D. A.	A & M 4
Martin, W. M.	Ag 3	Newson, F. J.	A & L 4
Martland, R.	A & L 2	Nichols, L. H.	Grad
Masson, Mrs. F. M.	p H.Ec	Nicholson, Miss L. B.	p A
Mast, C. K.	s A	Nicoll, J. M.	S 5
Matas, M.	M 4	Nicoll, Miss J. K.	A Grad
Mather, T. H.	Ag Grad	Nielson, S.	L 3
Matson, P. F.	Ag 3	Nix, H. L.	M 3
Matthews, A. W.	A Grad	Noble, C. E.	A & S 3
Matthews, Miss E. C.	A 3	Noble, Miss E. L.	Corr
Matthias, Miss M. H.	A & L 4	Obee, C. G.	c S 1
Mawdsley, K. W.	Ag 3	O'Brien, J. W.	c L 2
Mealing, C. H.	S 3	O'Connor, Miss S. J.	L 4
Mealing, G. R.	Corr	O'Donnell, C.	Com 4
Megas, J.	A & M 4	Oke, D. J. W.	c A & L 2
Mellet, P. M.	c S 1	O'Meara, G. W. G.	SS
Melnyk, Sr. T. Y.	Corr	O'Neill, A. J.	SS

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Olson, O. C.	PhmL 2	Rinehart, G. R.	A Grad
Orr, Miss O. A. I.	Corr	Rinehart, G. R.	SS
Ortner, G. S.	c PhmD 1	Ringwood, Miss E. E.	N 1
Osborne, Miss P. G.	A 1	Roberts, Miss J.	Corr
Osterland, C. D.	S 3	Robertson, Miss A. C.	p A
Owen, P.	Com 4	Robertson, Miss A. C.	N 1
Owens, Miss A. M.	A 1	Robertson, G. A.	SS
Page, S. F.	A 1	Robertson, H. B.	c L 1
Panabaker, H. E.	Corr	Robertson, Miss M. E.	Com 2
Parke, Mrs. M. V.	p A	Robinson, W.	Ag 1
Parmelee, Miss G. E.	c A 1	Roblin, Miss A. E.	SS
Parney, G. L.	L 3	Roblin, Miss A. E.	Corr
Paterson, F. W.	S 3	Rodie, T. E.	SS
Paterson, Miss L. C.	c Com 2	Rogers, H. B.	Corr
Patterson, E.	SS	Rogers, L. B.	S 1
Patton, Mrs. M. T.	s Grad	Rogers, Miss M. F.	c A 1
Pattullo, Miss C. B.	p A	Rogers, Miss M. E.	A & M 2
Pattullo, J. A.	Corr	Rookwood, M.	p A
Payment, R.	M 1	Rookwood M.	SS
Payne, J. W.	Corr	Rosborough, A. E.	A Grad
Peacock, G. W.	Com 4	Rosenthal, R. S.	c M 1
Pearson, J. G.	c PhmL 1	Ross, Miss E. C. I.	c A 1
Pearson, W. C.	A Grad	Ross, J. H.	s A
Pegrum, D. F.	A Grad	Ross, W. S.	A & L 3
Pegrum, R. H.	A Grad	Roth, Miss E. I.	Grad
Peirce, J. R.	Ag 3	Roth H.	SS
Pelluet, Miss D.	s Grad	Roth, Miss L. F.	p A
Peppard, A. H.	s S 2	Rovers, J.	PhmL 2
Perkins, M. G.	M 2	Rowe, Miss M. E.	A & M 4
Perraton, Mrs. E. G.	L 1	Roxburgh, J. M.	SS
Peterson, E. N.	c A 1	Roxburgh, D. B.	Ag 1
Philp, C. W.	A 2	Rubbra, F. C.	c S 1
Pierce-Goulding, E.	s A	Rudd, F. A.	L 2
Poirier, P.	L 3	Ruddy, C. E.	A & L 4
Pollock, C.	c S 1	Ruddy, J. O.	M 4
Polle, W. N.	L 4	Rush, R. D.	A & M 3
Pope, Mrs. M.	s A	Russell, Miss A. J.	A 2
Porter, Miss M. E.	p A	Russell, Miss E. J.	SS
Potts, W. S.	p A	Russell, L. S.	s A
Powell, H. B.	c D 1	Russell, L. S.	Corr
Powell, R. G.	A 4	Russell, L. S.	SS
Power, W. H.	c S 1	Rutherford, Mrs. H.	s A
Pratt, J. W.	Corr	Rybak, F. A.	M 4
Prevey, Miss E. E.	H.Ec 3	Saigeon, Miss A.	c A & M 1
Prescott, D. A.	Corr	Salt, G.	A 4
Primrose, N.	L 1	Sansbury, C.	L 3
Prior, K. H.	Ag 1	Sarochan, D. J.	Ag 1
Pulleyblank, W. G.	A Grad	Saucier, J. J.	A & L 4
Purcell, Miss V.	N 1	Saunders, W. G.	M 4
Putland, A. K.	A 4	Savage, S. S.	Com 1
Race, Miss M. A.	H.Ec 2	Scott, Miss B. H.	c A 3
Rae, Miss M. V.	M 3	Scott, Miss I. D.	c A 1
Ramsay, D. M. R.	A 3	Scott, J. B.	c S 1
Ramsey, Miss K. M.	p A	Scott, N.	PhmD 4
Rath, Miss M. A.	p A	Scott, S.	SS
Raver, Miss A.	A 4	Scott, R. J.	A p
Raver, Miss H. J.	A Grad	Scroggie, A. G.	Grad
Rawlinson, H. E.	M 3	Seabrook, P. N.	p S
Read, F. E.	A 2	Secord, Miss I.	N 1
Redig, Miss M. J.	H.Ec 1	Selnes, W. E.	A & S 3
Reed, G. E.	M 4	Shabaz, R.	L 2
Reeves, A. A.	M 2	Shackleton, E. J.	Ag 1
Rehwinkel, A.	A Grad	Shankman, Miss A.	c A 1
Rehwinkel, A.	SS	Shankman, H.	M 3
Rehwinkel, Mrs. B.	p A	Shaner, Mrs. J. K.	s A
Reid, C. D.	S Grad	Shanks, Miss B.	Corr
Reid, Miss M.	A 2	Shapter, G. C.	PhmL 2
Reilly, C. F.	A Grad	Shaver, Miss A.	A Grad
Revell, A. M.	A 2	Sharman, W. J. L.	c A 1
Revell, J. E.	Ag 1	Shaw, Mrs. A. B.	s A
Richards, A. G.	s A	Shaw, Miss E. H.	p A
Richards, Miss J. O.	N 1	Shaw, Miss L. M.	c p A
Richardson, E. A.	M 1	Shearer, Miss A. S.	Corr
Richard, C. H.	Ag 3	Shepard, L. J.	L 3
Riches, P. L. F.	A Grad	Sheppard, R. S.	A Grad

STUDENTS

Sheppy, Miss A. M. p A
 Sheppy, Miss E. M. p A
 Sherlock, Miss M. A 2
 Shiedel, Miss E. M. Corr
 Shillington, Miss F. A. A 1
 Shippam, F. M 4
 Shippy, Miss L. p A
 Shonn, F. C. A 2
 Short, W. A. L 2
 Shulman, L. W. Com 2
 Sieber, W. E. s A
 Siebrasse, W. G. c S 2
 Sigler, D. A & L 3
 Silverthorne, Miss M. E. A 3
 Simenstin, Miss G. p A
 Simmons, R. B. L 2
 Simmons, R. L. A 3
 Simpson, A. M. M 4
 Simpson, D. P. c Com 1
 Simpson, D. S. Com 4
 Simpson, Miss G. S. H.Ec 4
 Simpson, Miss G. S. SS
 Simpson, Miss M. S. A Grad
 Sinclair, C. R. p A
 Sinclair, D. H. c S 1
 Sinclair, R. D. s Grad
 Sissons, Miss A. R. M. s H.Ec
 Sissons, Miss D. A. Corr
 Skene, Miss J. I. H.Ec 3
 Skinner, Miss P. F. c H.Ec 2
 Skipper, Mrs. M. E. SS
 Skitch, C. H. c A & M 2
 Skouson, D. P. L 2
 Sloan, Miss H. M. c H.Ec 1
 Smith, C. A. S. Grad
 Smith, C. B. M 3
 Smith, C. R. s A
 Smith, Miss D. L. A 3
 Smith, Mrs. D. s A
 Smith, Miss E. I. Corr
 Smith, G. E. A 2
 Smith, H. E. A Grad
 Smith, J. M. F. Grad
 Smith, J. M. F. SS
 Smith, Miss V. s A
 Smith, V. M. Corr
 Smith, W. G. Ag 3
 Snedden, C. A. c D 1
 Soby, H. W. M 4
 Sorenson, Miss G. A 2
 Souter, L. C. L 2
 Sprague, P. H. M 3
 Sprung, D. A. Com 2
 Stacey, Miss D. M. SS
 Stacey, E. C. A & Ag 4
 Stacey, Miss F. H.Ec 4
 Stade, F. J. c A & M 2
 Stanford, Miss M. A 4
 Stauffer, M. L. M 3
 Steele, Miss E. M. A Grad
 Steeves, Miss H. P. Corr
 Steeves, Miss H. G. D. L 4
 Stephens, S. C. Com 3
 Stevenson, Miss A. Corr
 Stewart, F. J. S 4
 Stewart, R. E. A Grad
 Stock, S. W. S 5
 Stockwell, A. SS
 Stoner, D. D. c A & M 1
 Stoner, R. R. s M
 Stoner, R. R., Jr. A & M 3
 Stothers, Miss J. A 4
 Stothers, W. PhmD 4
 Strilchuk, N. C. M 4
 Stuart, C. E. A & L 1

Stuart, Miss F. N. Corr
 Stubbs, Miss F. L. A Grad
 Studholme, Miss B. G. A 3
 Studholme, Miss R. M. A 3
 Studholme, Miss R. M. SS
 Sturrock, M. G. S 2
 Stutchbury, E. W. L 3
 Suggett, C. A. Ag 1
 Sutherland, C. O. Corr
 Sutherland, C. D. D 2
 Sutherland, J. W. A 2
 Sulawa, S. PhmD 1
 Svarich, J. P. c S 2
 Swain, Miss R. M. c A 2
 Swift, W. H. A 4
 Swinarton, Miss W. K. Com 2
 Symes, W. E. S 5
 Syrotuck, M. Ag 1
 Syska, S. J. PhmL 1
 Tackaberry, S. F. A Grad
 Talbot, M. A. A & M 1
 Tallman, F. F. M 3
 Tanner, B. F. L 3
 Tames, J. A. S 4
 Taprell, Miss V. A 1
 Tavender, E. R. A & L 3
 Taylor, Miss B. L. SS
 Taylor, Mrs. D. A 2
 Taylor, Mrs. D. SS
 Taylor, G. B. Grad
 Taylor, Miss G. G. A 2
 Taylor, J. G. A Grad
 Taylor, J. G. SS
 Taylor, J. J. S 2
 Taylor, R. S. s A
 Taylor, V. B. Ag 2
 Telfer, L. S 4
 Terry, H. R. c S 2
 Teskey, H. G. A 4
 Tester, K. B. Ag 4
 Thom, J. M. L 3
 Thomas, D. H. Ag 3
 Thomas, M. B. c A 1
 Thompson, E. J. c A 2
 Thompson, J. H. Corr
 Thompson, J. H. SS
 Thompson, N. G. Ag 3
 Thomson, D. W. L 1
 Thomson, Miss G. H. A Grad
 Thomson, J. c S 1
 Thomson, L. B. Ag 3
 Thomson, Miss L. I. A 2
 Thomson, Miss O. M. p A
 Thomson, R. K. c A 1
 Thomson, W. J. Ag 1
 Thrope, R. C. D 1
 Thrasher, Miss M. M. A 1
 Thurston, G. B. D 3
 Tillotson, Miss H. A Grad
 Tilson, F. L. A Grad
 Timbres, W. L. Ag 1
 Timmins, Miss B. H.Ec 4
 Tinkham, E. R. c A 1
 Toby, Miss G. A 2
 Toby, Miss G. SS
 Todd, W. H. p A
 Tomlinson, H. O. A 4
 Topp, Miss J. A. p A
 Toole, W. PhmL 2
 Torgerson, Miss L. A. A 2
 Torrie, A. E. A Grad
 Torrie, A. E. SS
 Tregillus, Miss M. C. s Grad
 Trimble, L. M 3
 Trowbridge, Miss C. N 1

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Trowbridge, Miss M. E.	N 1	Wershof, Miss M. J.	A Grad
Truswell, W. R.	PhmL 2	Weston, D. T.	M 5
Tuck, M.	A 4	Whealer, Miss A. E.	Corr
Tucker, E. C.	Corr	White, C. E.	c S 2
Turcotte, L. S.	L 3	White, E. W.	A & L 4
Turner, J. R.	SS	White, J. N.	c S 1
Turner, W. O.	A & L 4	White, W. H.	c S 2
Tweed, H. L.	Corr	Whitesel, S. B.	c S 1
Tymich, C. F.	c S 2	Whiteside, W. C.	M 2
Uchida, M.	M 4	Whitford, O. W.	p A
Underwood, C.	A & S 5	Whittaker, W. C.	S 2
Van Idour, Miss L. E.	L 3	Whitworth, J. E.	M 2
Verchomin, J.	M 3	Whyte, Miss A. B.	N 1
Verge, J. W.	p A	Wilkie, Miss A.	A Grad
Vernon, C. G.	Ag 2	Williams, Miss B. L.	H.Ec 2
Verreau, E. J.	M 4	Williams, Miss B.	A 1
Verreau, M. J.	Corr	Williams, C. I.	Corr
Villett, G. H.	A Grad	Williams, J. M.	D 2
Villy, Miss B. L.	A 4	Williams, T. W.	SS
Voss, G.	c S 1	Williams, W. P.	Com 2
Voyer, A.	D 2	Williamson, J. O.	A & L 4
Waggett, J. M.	Grad	Williamson, Miss J. H.	A 2
Waines, F. D.	A & S 4	Willis, J. D.	S 2
Walker, A. E.	A & M 2	Willison, Miss M. C.	c A 3
Walker, J.	Ag 4	Wilson, Miss A. E.	A & M 2
Walker, L. A.	A 3	Wilson, B. H.	c Ag 1
Walker Miss M.	A 4	Wilson, E. B.	A & L 3
Walker, Miss V. I.	c H.Ec 2	Wilson, Miss H. M.	H.Ec 4
Wallace, M. L.	Ag 2	Wilton, Clark, H.	S 4
Wallbridge, E. G.	L 4	Winfield, Miss E.	p A
Walley, M. J.	M 1	Winter, J. E.	c S 1
Wallis, Miss E. E.	A 4	Wolfe, Miss E. E.	N 1
Walsh, Miss M.	c A 1	Wood, Miss D. L.	N 1
Walter, Miss E. M.	SS	Wood, E.	c A & Ag 2
Walters, G. T.	A 3	Wood, Miss E. H.	A 2
Walton, Mrs. J. C.	A Grad	Wood, K. P.	Corr
Walton, Mrs. J. C.	SS	Wood, R. P.	SS
Walton, R. E.	S 2	Wood, Miss R. Y.	A 4
Ward, A. E.	M 4	Woodford, R. S.	Ag 1
Ward, A. S.	s Grad	Woods, Miss M. K.	M 3
Warren, J. M.	c D 1	Wright, A. J.	c M 1
Watchorn, H. J.	L 4	Wright, C. B.	c Com 1
Waterman, Miss E.	c A 2	Wright, Miss E.	A Grad
Waterman, Miss M.	A 2	Wright, Miss E.	Corr
Watson, Miss Q. A.	A 2	Wright, G. E. K.	c A & M 1
Watson, Miss Q. A.	SS	Wrinch, L. B.	M 4
Watson, W. R.	A & L 2	Wyman, E. S. M.	A 1
Watson, W. S.	S 2	Yatchew, G.	Grad
Watsyk, J.	M 4	Yauch, C. E.	Ag 3
Watt, Miss M.	s A	York, J. J.	c A & M 1
Watts, E. H.	A & M 2	Young, Miss D. S.	H.Ec 2
Watts, G. W.	A & M 3	Young, Miss E. P.	Corr
Webb, H. R.	S Grad	Young, F. G.	A Grad
Wees, W. R.	A Grad	Young, Miss H. B.	A 4
Weinlos, C.	A 1	Young, Miss H. B.	SS
Weinlos, M.	M 2	Young, J. D. M.	c A & S 1
Weir, C. V. F.	A & S 2	Young, Miss M. I.	p A
Weir, Miss M. F.	p A	Younge, Miss A. R.	SS
Wells, Mrs. A. J.	s A	Younge, O. R.	Ag 3
Wells, J. M.	A & L 1	Zadra, M.	M 2
Wells, T. H.	SS	Zaretsky, B.	A 2
Wener, H.	A 1		

Scholarships, Prizes, Medals and Degrees, 1923-24

In October, 1923.

SCHOLARSHIPS

The Women's University Club Scholarship

Hilda Irene Jenkins.

Scholarships in the Faculty of Medicine offered by the College of Physicians and Surgeons of the Province of Alberta

First Year—General Proficiency: Harry John Laudan.

Third Year—Anatomy: Gerald Stuart Charlesworth.

Fourth Year—Physiology: Daniel Tuttle Weston.

The Scholarships of the Alberta Pharmaceutical Association

Degree Course—Third Year: Not awarded.

Licentiate Course—Third Year: Henry Kenneth Cronk.

The Aikins Scholarship in English Language and Literature

Barbara Lloyd Villy.

PRIZES

The Jane Alexander Memorial Prizes

In Latin: Mary Manson.

In Geology: George Salt.

Prize in the History of Medicine

John Frederick Kerr English.

The Harold Waldo Huestis Memorial Prize

In English: George Wesley Townsend Watts.

Prizes in Mathematics

In Mathematics 1: Hilda Irene Jenkins.

In Mathematics 3: Grace Annette Atkinson.

The Samuel Richard Hosford Memorial Prize

In English: Barbara Lloyd Villy.

The Vallee French Prize

Mary Manson.

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The French Prize of the Societe du Parler Francais
Rose Marie Yvonne Le Blanc.

The Historical Club Prize
Freda Marguerite Wees.

Prizes of the Association of Professional Engineers of Alberta
In Electrical Engineering: Sydney Wallace Stock.
In Mechanical Engineering: No candidates.

Canadian Institute of Mining and Metallurgy Prizes
Third Year: No candidates.
Fourth Year: No candidates.

Carswell Prizes in Law
First Year: George James Bryan.
Second Year: Sigvald Nielson.

FIRST CLASS GENERAL STANDING

Faculty of Arts and Sciences
First Year: Frank Edward Read.
Third Year: Hugh Dexter McKay; Sister Josephine Herbreteau.

Faculty of Applied Science
First Year: George James Knighton.

Faculty of Law
Second Year: Sigvald Nielson.

Faculty of Medicine
First Year: Harry John Laudan.
Second Year: Arthur Lightfoot Buell.
Third Year: George Ernest Reed; Leonard Brecken Wrinch.

Dentistry
Second Year (five-year course): Whitmore Pipes Calhoun.

School of Pharmacy
Second Year: Charles Campbell Colpman.

PRIZES AND MEDALS

In May, 1924

PRIZES

The Jane Alexander Memorial Prize

In Geology: Marjorie Walker.

The Gordon Stanley Fife Memorial Prize

In History: Kenneth Dickson MacArthur.

Stutchbury Research Prize

Islwyn Jones.

The Wells Prize in French

Sister Mary Margaret Hayes (Fourth Year French)

Anton John Bures (Third Year French)

The Cote Prize in French

Flora Moffat

Awards of the Association of Professional Engineers of Alberta

In Civil Engineering: James McLaren Nicoll.

In Mining Engineering: John Millen.

In Electrical Engineering: Wilfrid Eric Symes.

Canadian Institute of Mining and Metallurgy Prizes

John Millen

Carswell Prize in the Faculty of Law

Third Year: Sigvald Nielson.

MEDALS

The Governor-General's Gold Medal

Keith Bedwell Tester

The Lieutenant-Governor's Gold Medal for the Study of Shakespeare

(Not Awarded)

The Charles Allan Stuart Gold Medal in Classics

(Not Awarded)

The Alexander Cameron Rutherford Gold Medal in English

Barbara Lloyd Villy

The Women's University Club Gold Medal

Sister Josephine Herbreteau

Chief Justice's Gold Medal in Law

Sigvald Nielson

The James Ramsey Gold Medal in Mathematics

Muriel MacFarlane Gratz.

The Moshier Memorial Medal

(Not Awarded)

The Alberta Pharmaceutical Association Gold Medals in Pharmacy

In the Degree Course: Guy Fletcher Hollinshead

In the Licentiate Course: Charles Walter Bamforth

Le Club La Verendyre Gold Medal in French

Lesley Muriel Heathcote

FELLOWSHIP

The Lloyd Hartnoll Bishop Memorial Fellowship in English Literature

(Not Awarded)

UNIVERSITY OF ALBERTA

PRESENTATION OF DIPLOMAS

Diplomas in Pharmacy

Conroy-McGarry, Daisy	Levasseur, Wilfred Frank
McLeay, Doris Eccles	McKay, Ewen Roderick Wilfrid
Bamforth, Charles Walter	McKechnie, Archie Wright
Croisetiere, Joseph Alphonse	Olson, Orren Clifford
Dobbie, Mitchell Hyde	Rovers, John
Frickelton, Walter Nelson	Shapter, Charles Percival Gerald
Halliday, Francis Allan	Toole, William
Lee, Frank	Truswell, William Ronald

Admitted to the Degree of Bachelor of Arts

Balaam, Ruth Victoria	Clarke, Alfred Ernest
Beny, Helen	Clarke, Thomas
Bickell, Jessie Clarke	Crawford, Hugh Wilfred
Cook, Janet McLaren	Glover, Robert Melvin
Driscoll, Aileen	Grindley, Thomas William (with First Class General Standing in Arts and Agriculture)
Gerrie, Constance Conroy	Gerrie, John Wilfrid
Graham, Marjorie Kathleen	Harkness, Douglas Scott
Gratz, Muriel MacFarlane (with First Rank Honours in Mathe- matics).	Jamieson, Kenneth Richard (with First Class General Standing in Arts and Law).
Hayes, Mary Margaret (Sister)	Karran, Frederick Robert Douglas
Heathcote, Lesley Muriel (with First Rank Honours in Modern Lan- guages).	Lebourveau, Homer Benjamin
Herbreteau, Josephine (Sister)	Lee, John Gordon
Hobbs, Edith Hilda (with Second Rank Honours in History).	MacArthur, Kenneth Dickson (with First Rank Honours in History).
Hollinshead, Lorna Elizabeth	McCorry, James
Iddings, Theresa Alta	Macdonald, Bruce John Stewart
McCaffary, Marie Gertrude	McKay, Hugh Dexter (with First Class General Standing in Arts and Law).
MacLean, Dorothy Margaret (with Second Rank Honours in English).	MacMillan, William Aubrey
Macleod, Agnes Jean	Manning, Frederick Clarence
MacNab, Kathleen Marsh (with First Rank Honours in History).	Marshall, Samuel
Moffat, Flora	Megas, Joseph
Moraw, May	Newson, Frank Jost
Newson, Dora Allison	Powell, Roscoe George
Raver, Annabel	Putland, Arthur Kingsley
Rowe, Mildred Elizabeth	Rookwood, Maurice
Stanford, Margaret	Ruddy, Charles Emmett
Stothers, Jennie	Saucier, Jack James (with First Class General Standing in Arts and Law).
Villy, Barbara Lloyd (with First Rank Honours in English).	Simpson, Alexander Mills
Walker, Marjorie	Stacey, Earl Clifford
Wallis, Edna Irene	Swift, William Herbert
Young, Margaret Irene	Teskey, Hugh Garth
Baltzan, Harry Lewis	Todd, William Hall
Bradford, Andrew Cameron.	Tuck, Mervyn Anson
Butchart, Elwood Alexander	Turner, William Norris
Campbell, Clarence Sutherland	Underwood, Clifford
Cassels, John MacIntyre (with First Rank Honours in Political Econ- omy).	White, Edward William
	Williamson, James Owen

DEGREES

Admitted to the Degree of Bachelor of Arts, ad eundem

Hansen, Edna Jane Brandon, B.A.	Pearson, William Charles, B.A.
Wright, Elsie Elizabeth Margaret, B.A.	Rinehart, George Russell, B.A.
Balfour, Henry Edgar, B.A.	Smith, John Mark Frederick, B.A.
Ferguson, James David, B.A.	Stewart, Robert Edward, B.A.
Hedley, Robert Wesley, B.A.	Tackaberry, Seymour Foss, B.A.
	Torrie, Arthur Edwards, B.A.

Admitted to the Degree of Bachelor of Commerce

Caldwell, Olive Jane	Bures, Anton John (with First Class General Standing)
Charlesworth, Doris	O'Donnell, Cyril
Baker, Robert Mills (with First Class General Standing)	Owen, Philip
	Simpson, Douglas Stuart

Admitted to the Degree of Bachelor of Science in Arts

Andrews, Elizabeth Ellery	Baker, Roy Irvine
Bradford, Marjorie (with Second Rank Honours in Mathematics).	Salt, George (with First Rank Honours in Botany).
Mitchell, Bessie	Tomlinson, Horace Otto

Admitted to the Degree of Bachelor of Science in Household Economics

Fairfield, Alice	Simpson, Gretta Shaw
Lawson, Elizabeth Margaret MacArthur	Stacey, Ferne Lillian
Malone, Margaret Mary	Timmins, Beatrice
McIntyre, Edna Hazel	Wilson, Hilda Marie

Admitted to the Degree of Bachelor of Science in Pharmacy

Hollinshead, Guy Fletcher	Stothers, William
Scott, Norman	

Admitted to the Degree of Bachelor of Science in Civil Engineering

Dawson, Gerald Stewart	Nicoll, James McLaren
Fraser, Arthur Archibald	

Admitted to the Degree of Bachelor of Science in Mining Engineering

Jones, Islwyn	Millen, John
McDonald, James Alexander	Telfer, Leonard

Admitted to the Degree of Bachelor of Science in Mining Engineering ad eundem

Blair, Sidney Martin, B.Sc.

Admitted to the Degree of Bachelor of Science in Electrical Engineering

Fanjoy, William Thomas	McMillan, James
Fisher, Frederick Sorley	Stock, Sydney Wallace
Lebourveau, Homer Benjamin	Symes, Wilfrid Eric

Admitted to the Degree of Bachelor of Science in Electrical Engineering, ad eundem

Sterritt, William Robert, B.Sc.	Duncan, James Edgar, B.Sc.
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Admitted to the Degree of Bachelor of the Science of Agriculture (B.S.A.)

Backman, Wilfred Seth	Matson, Paul Fridolf
Foster, Leslie Henry Harland	Murdoch, Royal Douglas
Gilbert, Douglas Lyle	Peirce, John Raymond
McCannel, Donald Alexander	Yauch, Charles Edward
Mann, Hiland Henry Mark	Younge, Otto Ruder
Martin, William McKinley	

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Admitted to the Degree of Bachelor of the Science of Agriculture (B.S.A.), ad eundem

Cutler, Garnet Homer

Admitted to the Degree of Bachelor of Science in Agriculture (B.S.C.)

Addison, Frank Wesley
Anderson, William Alma
Dahl, Paul Le Mont
Ficht, Joseph Paul
McAllister, John Alexander

Malloch, John Gordon
Tester, Keith Bedwell (with First
Class General Standing)
Walker, John

Admitted to the Degree of Bachelor of Laws

Fisher, Helen Margaret
O'Connor, Sarah Julia
Steeves, Helen Douglas
Van Idour, Lila Elsie
Allen, Gordon Hollis
Bercov, Abraham
Budd, William Sinclair
Chrishop, Norman Stanley
Clarke, Peter Drew
De Mille, William Ewart
Ford, Francis Armour (with Dis-
tinction)
Graburn, William
Koch, Alfred
McBrine, Arthur Richardson
McClung, John Wesley
McRae, Donald Murray

Millard, MacDonald
Moraw, Lorne Stanley
Nielson, Sigvald (with Distinction)
Parney, George Lyman
Paterson, Gilbert Currie
Poirier, Paul Emile
Shepard, Lionel John
Simpson, Alfred
Souter, Lewis Carnaby Ross
Stutchbury, Ewart William
Turcotte, Louis Sherman (with Dis-
tinction).
Wallbridge, Edward Gordon
Watchorn, Hubert Jakes
White, Ranald Dunaverty
White, Thomas Everett
Wood, Sydney

Admitted to the Degree of Doctor of Medicine, ad eundem

Bell, William Wilberforce, M.D.,
C.M.
Melling, Peter, M.B.

Thompson, Gordon Edward, M.D.,
C.M.
Vango, Harold Main, M.D., C.M.
Yak, John, M.D., C.M.

Admitted to the Degree of Master of Arts

Cram, Lilian Alberta, B.A.
Gold, Margaret Hazlewood, B.A.
Stubbs, Frances Lovella, B.A.
Wershof, Minnie Jennie, B.A.
Balfour, Henry Ezra, B.A.
Clark, Harry Cleminson, B.A.
Dobson, Harold Edward, B.A.
Hart, Thomas, B.A.
Lipson, Barnett, B.A.

Manning, Gerald Frederic Langley,
B.A.
Marion, George, B.A.
Pearson, William Charles, B.A.
Pegrum, Dudley Frank, B.A.
Smith, Edgar, B.A.
Sonet, Edouard, B.A.
Stewart, Robert Edward, B.A.
Tackaberry, Seymour Foss, B.A.
Tompkins, Stuart Ramsey, B.A.

Admitted to the Degree of Master of Science in Arts

Dowding, Eleanor Silver, B.Sc.

Scroggie, Arthur Galbraith, B.Sc.

Admitted to the Degree of Master of Science in Applied Science

Blair, Sidney Martin, B.Sc. (Mining)
Reid, Charles David, B.Sc. (Engineering Physics)

Admitted to the Degree of Master of Science in Applied Science, ad eundem

Stansfield, Edgar, M.Sc.

PROFESSIONAL EXAMINATIONS

Admitted to the Degree of Master of Science in Agriculture
MacDonald, William Duncan, B.S.A.

Admitted to the Degree of Bachelor of Education

Hedley, Robert Wesley, M.A.	Sheppard, Ross Stanley, M.A.
McGookin, John Young, M.A.	Taylor, John Gladstone, M.A.
McLeod, William Joseph, M.A.	

Admitted to the Degree of Bachelor of Divinity
Ogston, Alexander Whyte, B.A.

Admitted to the Degree of Doctor of Science
James Bertram Collip, M.A., Ph.D.

Admitted to the Degree of Master of Arts, Honoris Causa
Vernon West Barford, A.A.G.O.

Admitted to the Degree of Doctor of Laws, Honoris Causa
Chief Justice David Lynch Scott
Christian Peter Marker, Knight of Danebrog

PROFESSIONAL RESULTS

Since Convocation, 1923, the following persons have passed the examinations for License to Practise, conducted by the University on behalf of the Affiliated Professional Societies.

In September, 1923.

Medicine:

Melling, Peter.	Semmens, Alfred W.
Sarvis Ewart Sproat.	Thompson, Gordon E.
	Vango, Harold M.

Nursing:

Beausoleil, M. L.	Woods, H. Q.
Coolin, P. R.	Worthy, B. M.
DeMan, B. C.	Jardine, S. H.
Donald, A.	Bruce, E.
Dafoe, H. G.	Matthews, E. M.
Fisher, H. E.	McNiven, E.
Grier, M.	Gillies, A. M.
Leggett, M. M.	Eaman, L.
Loughren, S. B.	Campbell, J. M.
Lucas, W. B.	Gray, C. E.
MacKintosh, K. C.	Golley, A. W.
McPherson, M. R.	Henderson, I. E.
Moorhouse, F.	Martin, A.
Nordstrom, G. A.	McNutt, L. E.
Pollock, S. L.	Mahaffy, P. L.
Rebar, C. A.	Robitaille, A. E.
Robertson, E. E.	Smyth, V. J.
Shand, I. L. M.	Stewart, M. C.
Shupe, A. P.	Van Camp, L. R.
Thomas, F. M.	Walsh, M. E.
Thurber, L. C.	McCallum, F. I.
Towers, M. A.	Sutton, A.
Tuplin, M. J.	Stibbards, M. E.
Wilde, E. M.	Buck, F. E.
Willows, L. F.	

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Pharmacy:

Caldwell, A. L.
Davidson, F. D.

Dickson, H. S.
Field, T. H.

In December, 1923

Accountancy:

Christian, Charles
Harris, George Granby

Morrison, Kenneth John

In May, 1924

Nursing:

Askew, A. E.
Bengston, E. V.
Blaikie, A. E.
Carter, G. E.
David, F. E.
Doe, A. I.
Filiatreault, O.
Finley, M.
Forel, D. M. J.
Geraghty, M.
Gwaltney, S. A.
Helps, W. M.
Henn, E. H.
Joughin, F. V.
Kilgammon, M. A.
Kraft, A.
Lunn, K.

Lyman, M. H.
McDougall, I. L.
May, E.
Palmer, E. B.
Patterson, V.
Peterson, M. A.
Reaume, M. J.
Riley, A. G.
Roberts, V. M.
Ross, M. A.
Robinson, A. L.
Stewart, A. L.
Tarrant, A. A.
Travis, O. J.
Tubman, J. T.
Wardman, M. E.
Williams, M. E. I.

Medicine:

Stoner, R. R.

Optometry:

Miller, J. S.

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